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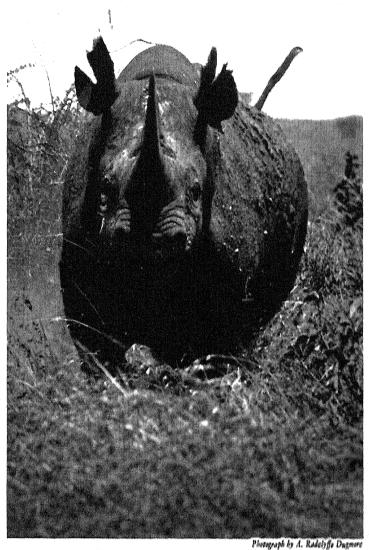


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TRAILS OF THE HUNTED



THIS CHARGING RHINOCEROS WAS TURNED BY MR. CLARK AFTER MR. DUGMORE HAD LET HIM COME TO FIFTEEN YARDS FOR A CLOSE-UP PICTURE

TRAILS THE HUNTED

By JAMES L. CLARK



WITH ILLUSTRATIONS

LITTLE, BROWN, AND COMPANY
BOSTON
1928

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TO

SALLY

My Wife and Companion in the field and at home, this book is affectionately dedicated

FOREWORD

"Or making many books there is no end; and much study is a weariness of the flesh." So spoke Solomon, and at times even the most enthusiastic readers among us are inclined toward the views of the great preacher. In the present volume, however, we must inevitably discover an exception, for it is written by a man who knows his subject and about the subject he knows.

James L. Clark has had many opportunities such as are given to few, and he has not failed to take advantage of those opportunities. First and foremost came the chance to work under Carl Akeley, a man who stood alone in his generation as a combination of scientist, sculptor, taxidermist, photographer, and author. For many years Clark was Akeley's companion in both field and indoor work, first as pupil and then as associate. He was engaged directly in the development of the Akeley camera, and with it has produced some unsurpassed photographs of life, of both man and beast, in remote corners of the world.

Clark's work in modeling the groups of the large game of Africa will remain a lasting — I had almost said living, and it would not be far from the truth — memorial to him in the American Museum of Natural History. It is to be regretted that

FOREWORD

he has not had the time to do more in bronze. A replica of the rhinoceros which he made fifteen years ago stands in the hall at Sagamore Hill, and Father took great pleasure in it.

Clark is no closet naturalist; his field experience has been long and varied, embracing lengthy expeditions in North America, Africa, and Asia. He speaks with the authority of a trained and intelligent observer. It is to be hoped that this volume is only the forerunner of a series drawn from his store of past experiences as well as from his future voyaging.

KERMIT ROOSEVELT

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TRAILS OF THE HUNTED

CHAPTER I

THE VANISHING ANIMALS

THERE is an idea, which is firmly intrenched in the minds of many people, that wild animals are terrifically ferocious — that the hunter in the wilds must forever be guarding against attacks by wolves, by lions, by tigers, and by countless other animals - depending, of course, upon what land the hunter is visiting. It is unfortunate that such a belief should be so widespread, for it is far from accurate. That wild animals will, sometimes, attack man is true enough. That men have been killed by lions and tigers and elephants and others is a matter of record, but that wild animals are particularly fond of attacking men is anything but true. Such stories have come to be believed because many hunters have acted more carelessly than was wise in the vicinity of the so-called "dangerous" game, and furthermore, have not been at all averse to appearing in the most heroic possible light after their encounters. Sometimes, too, the imaginations of hunters have run away with them, as the imaginations of fishermen are said to do, and of course, those who stay at home are perennially eager to hear as many stories as possible of hairbreadth escapes.

I have spent much time in the field hunting

animals that have the worst possible reputations for ferocity, and the reason I have hunted them has invariably been to study them. In the twenty-five years that I have spent in museum work, in big-game hunting, and in taxidermy, I have come to know a good deal about the animals of America, of Africa, and of parts of Asia, yet it is my opinion that wild animals are very rarely dangerous to man.

The truth of the matter is that there is not an animal in the wilds that is so prone to attack man without reason as is the average high-spirited domestic bull or stallion, such as are to be found upon countless farms here in the United States. There are one or two concerning which some reservations might properly be laid down, but they are rare. The rhinoceros is the outstanding one in this field, and in the next chapter I shall give my ideas of why this blundering old fellow is troublesome. Yet despite the fact that innumerable observers have announced identically what I am now announcing, the public insists that lions and tigers and wolves and all sorts of other beasts are forever lying in wait to leap upon some unsuspecting person, in order to devour him then and there, or in order merely to have the pleasure of tearing him to bits.

All of this, of course, is nonsense — Man is the only animal that kills for pleasure. Furthermore, he is far and away the most belligerent. He will often go out of his way in order to start a scrap. I

know of no other animal that will not go out of his way in order to avoid one, unless his rights are being invaded or he thinks they are.

I do not mean that animals never kill men. They do. And if a man should happen to fall into the jaws of a hungry lion, the lion would have no qualms of conscience whatever about making a meal of the unlucky fellow. But instances are rare in which lions have actually started trouble with men, and the same is true of other animals. I have more than once blundered squarely into the midst of whole packs of lions - and they have bolted. I have been among herds of elephants and have watched one herd of two hundred and fifty from the thorny branches of an acacia tree, which almost any one of that herd could have pushed over. Yet despite the fact that I had been shooting at them and that some undoubtedly saw me clinging to my precarious perch, not one of them attempted to touch me, although the front of the column came within eight yards of my tree, and two old fellows approached to within six or eight feet and actually wiggled their trunks at me. I have several times been surrounded in the bush by herds of African buffaloes - and they are considered Africa's most dangerous animals - yet I have gotten away scot-free even after I had selected my specimens and brought them down.

Wild animals are much less dangerous than automobiles. One is in greater danger attempting to cross Fifth Avenue, in New York, than he is in

going unarmed through the fifty thousand or more head of wild animals that inhabit the one hundred and ten square miles of the Crater of Ngorongoro in Africa. The dangers arising from wild animals impress me so little that if there were any purpose to be served in so doing, I would not hesitate for a moment to make the crossing of Africa from Mombasa to the mouth of the Congo River or from Cape Town to Cairo without a gun.

All of this is commonplace truth to experienced hunters in Africa, yet many inexperienced people somehow cannot believe it. If I should tell a series of blood-curdling stories of experiences with animals, I would have no difficulty in getting many people to believe me. But when, on the other hand, I make statements like these I have been making, it is very hard indeed to convince some readers that I am veracious.

Animals rarely become dangerous except when hunters encroach upon them or when they have been wounded, but if the hunter comes upon an animal suddenly, and unexpectedly, both of them are likely to be surprised, and the animal, fearing that he is being attacked, may charge his real or his supposed enemy in order to rid his sanctuary of a foe.

For twenty-five years I have been hunting animals, studying animals, mounting animals in my own studio and in one of the world's greatest museums of natural history. I have spent many months among the animals of Africa. I have studied

and mounted most of the North American game animals. I have traveled in extremely remote sections of Central Asia, always studying animals. In that time I have learned a bit about them, and, to be truthful, I have had more than one real adventure. Several times I have thought that the end had just about come. Yet I have never once been injured by an animal, and rarely have I been in a tight place except when I, myself, started the trouble. The only time I was ever injured was by men. A couple of times I have been charged unexpectedly — once by rhinos and once by buffaloes — but except for those experiences I have my own self to thank for the occasional difficulties that have arisen. Experienced hunters realize all this, and one professional hunter named Hurst, with whom I was at one time in the field, sometimes went very far indeed in his familiarities with animals. On several occasions he actually walked up to lions and "booed" at them in order to get them to run. In each case they did, but I admit that I would n't care to experiment with such a method of chasing them away for fear some particular individual might fail to interpret my "boo" as a suggestion that he depart.

It is from the writers of fiction and from careless or highly imaginative observers not at all averse to demonstrating their own bravery that we get most of our pictures of fearful jungles, dripping with moisture and shutting out the light of day. I have seen dripping jungles, and other jungles that almost seemed to shut out the light, but the fiction writer seems to believe that such conditions are horrifying. Neither he nor some of his readers seem to have noticed that some of the delightful forests of the United States often drip with moisture, and where the vegetation is especially thick, the light is often largely excluded. In the jungles of fiction, however, leopards lurk on every limb. Innumerable snakes swing from the trees. Danger is forever present, and how the mighty fiction hunters ever manage to escape alive from the fanciful dangers that surround them I cannot see, especially as they so often do such fool things. Only by running into danger like veritable Simple Simons and fighting their way out again like reincarnations of Hercules can any single one of them manage to reach the end of the book that tells of his adventures

Any one with more than a slight acquaintance with natural history must realize that Africa, for instance, cannot, in the very nature of the case, be half so dangerous as it is painted. To begin with, Nature has so arranged things that life cannot exist without food. The result is that wild life, until it is interfered with by man, always bears a certain ratio to the food supply. If the animals were so numerous as to eat up all the food, obviously they would then die off. Consequently in Africa — as elsewhere, before the white man came — there was a sort of balance of wild life.

This balance was roughly as follows:

Herbivorous animals — the antelopes and zebras, giraffes and many others — were in the majority, for obvious reasons. The vegetation on which they fed was plentiful. Their ranges were wide and the country was ideally suited to them — or they to the country. Consequently there were vast herds of these creatures — hundreds of thousands of them. Zebras and antelopes, together with scores of other species, wandered over the plains, and almost the only enemies they had were the comparatively few carnivorous animals that fed upon them.

That these meat-eating animals were, comparatively, not so numerous is more or less obvious. They fed, of course, upon other animals - principally upon the timid herbivorous animals - but had more than a small percentage of the antelopes and zebras and other herbivores been killed, they would gradually have disappeared, with the result that, in time, the meat-eaters would have been faced with starvation. In the many thousands of years during which this struggle for life was going on, there ultimately came into effect that remarkable natural balance that made it possible for the meat-eaters to have all the food they needed without eliminating the animals on which they fed. The herds were not seriously affected by the inroads of the animals that fed on them. In fact, they increased. Had the lions and leopards, the cheetahs and wild dogs, the hyenas and jackals been anywhere near so numerous as were the animals on which they preyed, it is obvious that the food supply would have been exhausted rapidly. The meat-eaters would then have taken to eating each other, and Africa could never have developed the huge herds that were in existence until so recently.

So, in trying to picture Africa, one must bear in mind that the great majority of the animals one sees are not meat-eaters, and among such animals far and away the greater portion are very timid. Few feel any call to attack other animals or to attack man. True, rhinos and buffaloes are herbivorous and they are likely to be dangerous. But it is obvious that neither of them has anything to gain in fighting save when he believes that he is fighting against a danger to himself.

There seems to be a growing interest in animals on the part of the public, due to the activities of our museums, and of the men who have hunted in the name of science. It is a change that I welcome. With interest aroused, understanding will come, and the moment there is a real understanding of animals there is bound to be sympathy for them. Goodness knows they need it. Civilization may benefit mankind, but certainly it is hard on the animal world. Where formerly there was room enough for both animals and men, now the population of the world is increasing rapidly, and ranges that formerly were undisturbed by men are falling before the plow. The result is that

animals are a nuisance. In Africa the elephants sometimes invade the limited garden patches of the natives, and there comes a demand that the elephants be killed. Lions kill the settlers' stock, and the settlers decide to exterminate the lion. Fences are erected, with the result that ranges disappear, and even between 1909, when I first went to Africa, and 1923, when I went again, vast changes took place in the animal world. In 1909 the Athi Plains swarmed with game. Huge herds of zebras, hartebeests, impallas, giraffes, and scores of other harmless creatures, together with occasional rhinos and lions and other animals, all could still be found on those wonderful grassy plains. To-day one may travel for days at a time in that same district and see only a fraction of the numbers that once covered the plains as far as the eye could reach. To the newcomer, a herd of fifty zebras is a wonderful sight. A few hartebeest, half a dozen giraffes in the distance, and a handful of others may excite him tremendously, and give him the impression that the game still is numerous. But to those who knew the Athi Plains as they were only a little while ago, the remnants of game now to be seen there are pitiful indeed.

It was my good fortune in 1902, while I was still studying sculpture at the Rhode Island School of Design, to have Herman C. Bumpus, who was then the director of the American Museum of Natural History in New York, suggest that I become a member of the Museum staff with the idea of

applying myartistic training to the mounting of animals. Taxidermy was, at that time, just beginning to make real headway, and the artistic possibilities of taxidermy were gradually being recognized. It was as a sculptor, then, and not at all as a taxidermist, that I entered the Museum. My first task was that of mounting an elk, and before I did anything else, I spent a week at the Bronx Zoo, modeling an elk from life. That was the beginning of my study of animals. Since then I have kept steadily at my work, and in order more thoroughly to know the animals, I have spent many months in the field. One can get many ideas from the animals to be found in a zoo, but conditions are far too artificial in such a place not to affect the animals. What lion behind the bars. of a cage has not lost the majesty which is the inherent quality of every lion of the wilds? Because of this, it is necessary for the taxidermist and the animal sculptor to study his subjects in their natural surroundings. I made several hunting trips about the United States and Canada in the seven years after I joined the American Museum, but because I had become acquainted with Carl Akeley and several others who had been in the field in Africa, and had heard their fascinating accounts of that extraordinary land, I decided that my work could never be what I hoped some day it might become unless I too could visit that outstanding animal paradise.

The opportunity did not come, however, to

accompany any Museum expedition, and not until I became acquainted with A. Radclyffe Dugmore, the animal photographer, did an opening present itself. Dugmore had already spent much time in the field in America, making animal photographs, when Theodore Roosevelt decided to take his African journey. Dugmore had long hoped for an opportunity to visit Africa, and now he saw his chance. Because of the interest in African game that Roosevelt's proposed trip had built up, Collier's Weekly was ready to sign a contract with Dugmore to go to Africa ahead of Roosevelt, in order to take photographs of the game, which were to accompany articles to be written for the magazine by the photographer. When I heard of all this I told Dugmore that he was very foolish indeed to think of going to Africa alone — that the animals there might prove to be dangerous, for he would have to approach them closely in order to get his pictures, and some of them might attack. I argued that he could take better photographs if he had some one to stand guard over him, in order to protect him from the charges of any animals that might take exception to his presence. I even offered to pay my own expenses, save when we were actually in the field, if he would take me as his official "protector."

To go with Dugmore I was forced to resign from the Museum, but I was so delighted when he finally accepted my proposal that no other difficulties were permitted to stand in the way. I knew that I would have a superb opportunity to study animals to my heart's content, and thus it was that I left New York in the fall of 1908, joined Dugmore in Europe, and went with him to British East Africa, where I remained for fourteen months — outstaying Dugmore by more than half of that time.

Ever since then I have periodically gone into the field. I have hunted and studied in Nova Scotia, Wyoming, Alberta, British Columbia, and Alaska. I have visited Africa three times. I have crossed Asia from India and the borders of Afghanistan to Siberia and China. Always, on these journeys, I have had animals principally in mind. I am still as interested in my work as I was that day in January, 1909, when first I stepped ashore at Mombasa, British East Africa, and if I have been able to help in the important task of presenting to the public a truthful picture of animals, I have not failed at what I set out to do.

A hundred years ago there were very, very few careful observers of animals. A hundred years from now there will be very, very few animals to be observed. Now is the time to become acquainted with those interesting and appealing creatures which have inhabited the earth for so many thousands of years, but which, unfortunately, are rapidly giving way before the inexorable advance of civilization. Before many years have passed the animals will be gone, or the pitiful remnants will be so trifling and scattered as no longer to be typical. Only in the museums

of natural history and in books and motion pictures on the subject, will information concerning them be found. The work, then, is not merely for the present—it is for the future. And by future, I mean that long future throughout all of which, necessarily, we who are living to-day will be the ones upon whose labors most of the information concerning the larger animals will be based.

Species after species is being exterminated. The quaggas, that once ranged in vast herds over the plains of South Africa, are utterly gone. Fifty years ago they were amazingly numerous. Then, so quickly were they killed off, that not a single specimen is to be found in any museum in the United States. Other beasts, too, have disappeared, and others still are following. But having awakened to the importance of making a thorough study of all animals, it is likely that before the end of the Age of Mammals has been reached, a fairly adequate record of most animals may be preserved in museums, in motion pictures, and in books. It is with that hope that I have spent the years since 1902 in studying them, in modeling them, and in mounting them.

Quite regardless of what we may do now, the animals are doomed. The best for which we can hope is that a wider appreciation of them, and a greater sympathy for them may stave off the day when they will no longer range abroad as they have ranged since before mankind first appeared upon the earth.

CHAPTER II

RHINOS

Africa is changing. To the newcomer, it is true, the herds of game still seem huge. Lions and rhinos and elephants still seem plentiful enough. But to those of us who first went out to British East Africa before advancing civilization and the numerous hunters had made such fearful inroads among Nature's original inhabitants of the plains and jungles, it seems like hardly more than a shadow of its former self.

I have played my part, certainly, and I often wish that I had been able to shoot less. But I have shot more often for a purpose than for "pleasure", and have hunted principally for specimens and the purposes of information.

Dugmore wanted no trophies save those he planned to record on his negatives, and we decided, on that expedition, never to shoot save in self-defense, except when meat was required. Our task was to photograph the animals in their native haunts, in order that a serious and interesting record might be made before civilization had changed the face of Africa — before the game had been driven out or killed. Most of the shooting that was done fell to me, for Dugmore was the photog-

rapher, with his head buried in a huge camera, while I, with my gun, stood beside him in order to protect him — and myself — from the charges of those animals which took exception to our impertinence.

Neither of us had been in Africa before, and I had never shot anything more than a few elk, mountain sheep, and other similarly inoffensive American animals. But now I was to act as guard over Dugmore, who was decidedly at a disadvantage when he was operating his huge reflex camera, with his face buried in the hood. I must say that I admired his nerve as he kept focusing his lens on charging rhinos, without raising his head in order to check up on what his ground glass told him. It was strain enough to stand there with a gun in my hands, without having to depend on some one else to stop the beasts or turn them before they came too close. And, of course, it was Dugmore's desire to let them get as close as possible before he snapped the camera, while I had agreed not to fire until I heard the shutter as it was released. I must say that once I heard it go and knew that another picture of some charging animal had been made, I rarely waited long before I fired, for many times we had rhinos come pounding and snorting up to within fifteen or twenty yards of us before Dugmore's shutter clicked. After that there was very little time left, and on at least one occasion there was far too little for either peace of mind or safety.

We had outfitted at Nairobi, having reached that town late in January, 1909, and obtained permission from the authorities to photograph in the Southern Game Reserve—a ten thousand square mile district lying southeast of Nairobi, with the Uganda Railroad as its northern boundary. Hunting in that district was prohibited, but we were not going to hunt, although, naturally enough, we were forced to take guns in order to protect ourselves.

It was on the third of February that we left the railroad at Kiu, and made camp within a stone's throw of the station. I had often been in camp before, but that first night on the Kiu plain seemed very different to me. Already, from the train, we had seen many animals, and we knew that there were more than antelopes and zebras about. It was wonderful lion country, and while we had as yet seen no rhino, the natives we had hired assured us they were plentiful. In that, by the way, they almost understated the case. In the days that followed we often found that they were far too plentiful.

I remember distinctly that I did not sleep well that night (I suspect that it was not entirely because I had not yet become accustomed to my cot), and the next morning both Dugmore and I were up bright and early in order to be about our work. It must be remembered that we were among the earliest of the photographers to enter Africa. Schilling, it is true, had preceded us, and no doubt

a few snapshots had been taken by others, but the experience of these others had not been compiled so as to help us to follow in their footsteps, and it was up to us to learn as we went. That meant that our equipment was largely theoretical, and our methods, of course, were those that Dugmore had developed while photographing the totally different wild life of North America. On top of that, I was not at all certain of what I would do when a rhino or a lion charged. Of course, I didn't tell Dugmore, but the truth of the matter is that I wondered more than a little about my ability as a marksman, and was not at all reassured when I took my elephant gun and tried, very unsuccessfully, to hit a tin can that I set up as a target.

However, otherwise we were ready, and bright and early on the morning after our arrival at Kiu, we started to march at the first sign of daylight, while the plain lay cool and inviting before us. But though we traveled for half the day, and for a part of the day following, we saw nothing in the way of game save the usual antelopes and zebras.

It was during our third night out that I heard my first lion. It was late in the evening that he roared — twice — and I shall never forget the thrill that awesome sound gave me. Never before had I heard a lion roar in the open, and the roar of a caged lion is not to be compared with it. Iron bars give one a far greater sense of security than one is likely to imagine. But out there on the Kiu plain I knew that there were no iron bars between the lion and me. It was all very well to assure myself that lions rarely enter camps—when the fires are burning. I knew enough about animals even then to realize that there is no animal Hoyle. Lions are individuals, and quite regardless of what any given one hundred lions might have done in the past, the one hundred and first might decide to act differently. It is no wonder that I had some difficulty going to sleep.

But the lion turned out to be quite respectful, and nothing except our imaginations disturbed us that night. Nor did we have any luck on the day following. We had set a number of flashlights by a water hole, but they had evidently been set off by night-flying birds, for the developed films showed nothing, and then, a day or two later, we had our first experience with rhinos.

We located two rhinos half a mile or so away, and decided to try for a photograph or two. In working our way around so as to have the wind blow from them to us, we suddenly found that we had somehow gotten in between the ones we had seen and another old fellow. That necessitated a change in our tactics, and after a very careful bit of dodging, we managed to get around down wind from him also. Dugmore, from a distance of a hundred yards, succeeded in taking two telephoto pictures of him, while the old fellow still was utterly undisturbed. Even the tick birds were still

sitting on his back. With two pictures taken, we were trying to plan our next move when we saw the object of our interest preparing for his noonday siesta. He poked about a bit near a small bush, smelled it thoroughly, decided that it offered shade enough, although it offered almost none at all, and then lay down.

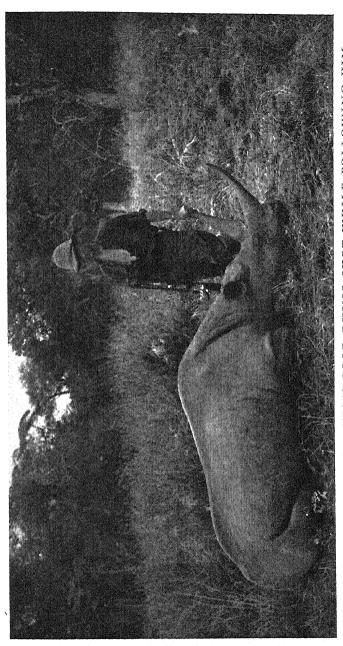
We waited for a few minutes while the rhino went to sleep, and then Dugmore, with me following him, began a careful stalk in order to get a close-up of the ugly old beast. Having approached to within about thirty yards Dugmore made his camera ready. I stepped out beside him with my rifle, and Dugmore made a little noise.

It was extraordinary how quickly that rhino was on his feet. More than that, he no sooner was up than he was charging. I can see him yet. His head was down and he snorted like a switch engine. His tail was up and his short, heavy legs were pounding along furiously. I aimed at once, and listened for the camera, for to play my part successfully I dared not fire until the picture was taken. It certainly took that rhino a very few seconds to cover half the distance to us, but it seemed more than long enough to me. He seemed to be the size of a freight car, and his snorts were actually terrifying. Then, to my relief, I heard the camera snap. I fired immediately, at his shoulder, and he turned at once. Theoretically, I was trying merely to turn him, but I cannot be sure just what I was thinking at the moment. I suspect that I

actually fired to kill him, and that turning him was mere accident, for one is not likely to have complete control over himself during his first rhino charge, nor some of his later ones, either.

However, it was his shoulder I hit, and he turned, which was quite satisfactory. And once he turned, I was in no mood to do anything more. The truth is that he was not seriously hit, and I have always since been glad that he got away. Had he been hard hit I would have gone after him, but from the way he galloped off one could see that he would recover from that shot within a few days. So we sat down and wiped the perspiration from our foreheads. It had been even more exciting than I had anticipated, and we found, when we had recovered ourselves, that the old fellow had turned when he was exactly fifteen yards from us.

Now that is a particular point that I'd like to make. Fifteen yards is forty-five feet, and forty-five feet seems like a goodly distance if one measures it out on his lawn. If one stood forty-five feet from a cage in which a rhino was confined, the distance would be far too great. Any one, most certainly, would be likely to approach to within two yards, or even less. But forty-five feet of African plain seems like an absurdly small distance when a rhino is bearing down at you. He seems, by that time, to have blotted out almost the entire landscape. There is apparently nothing else to be seen, for he has seemingly grown to



THE AUTHOR WITH A VERY GOOD RHINO SHOT WHILE FOLLOWING HIM IN THE BUSH

enormous dimensions. I suppose that a person who has never faced a charging rhino at such a distance can understand the psychology of that, but I suspect that imaginations rarely are sufficiently strong to make it possible for one who has n't actually been there to realize the sensation.

After that charge I was more than willing to rest for a time, even at the risk of losing the rhinos we had first started to stalk. But Dugmore had his eyes on them and presently started his stalk. They were a male and a female and were making their way slowly in the opposite direction, while we followed at a quick walk. They did not seem particularly disturbed, but just before we had gotten into a position from which Dugmore could photograph them to good advantage, the tick birds flew from their backs, and at that warning they turned about. We were down wind from them, and at least a hundred and fifty yards away, so we expected no trouble, but we planned without the rhinos, for after a few snorts and a little running about, both of them came pounding straight for us.

Dugmore was busily changing his plates and adjusting his shorter focus lens for close action. I was intent on my part, wondering which one I would shoot first and hoping Dugmore would get his picture quickly without letting them come too close.

At first they started in a quick walk, gradually increasing their speed as they came. This increased

to a slow trot and then a fast trot, as they shortened the distance and dropped their heads lower and lower, which is always the sign of business. They were charging now, and cold chills crept up my back while I wondered in silence why on earth Dugmore was waiting so long. At fifty yards I took the initiative, having but two shots in my express rifle, as it was my duty to protect Dugmore as well as myself, and fired at the cow which was a little to the left, leaving the big bull for the picture. She dropped to her knees — down for good, I thought. Then I swung the gun over and put the bead on the brain of the bull and held my finger on the trigger, awaiting breathlessly the click of the shutter. He was almost upon us before that welcome sound came, and I immediately fired. Down he went in a cloud of dust, as his nose plowed into the ground; and his speed was so great I saw his hind quarter rise in the air and fall to the side.

Sighting along the gun barrel I could not see the cow, but my boys told me she had gotten up and continued her charge and did not turn until the second shot. It was well I did not know this, as I might have funked it, with the two charging rhinos and but one shot to stop them. When we stepped off the distance where the bull fell, it was just eleven yards.

That was enough hunting for one day, and we decided to look for no more trouble. Instead, we measured the fallen rhino, cut off his horn in order

that it might be turned over to the Game Ranger's department—for trophies taken in the Reserve are all demanded by the government in order to discourage sportsmen—and permitted the natives to cut the animal up for meat.

It was then that I got my first close view of a rhino's structure. He looks to be, and really is, a species that has descended to us from earlier times. His brain is small, and perhaps because of that he is not extraordinarily clever. As a matter of fact, he seems to learn nothing from experience. His eyesight is notoriously bad, and his strength is tremendous. The result is that when his ears or his nose tell him that something unusual is in the neighborhood — and his nose and ears are very keen — he promptly proceeds to investigate. It is this investigating process that is sometimes called a charge.

I am the last person to wish to generalize unduly over an animal's habits. I have seen them do too many things that were not on the calendar to permit myself to draw unreserved conclusions. But I do believe that the rhino, because he has no enemies except man, has developed this method of investigating because he could do so, except with man, with the utmost impunity. The only things that he might run across that might do him any harm are elephants, buffaloes, and other rhinos, but even his half-blind eyes can make out such huge antagonists before he has come into abrupt collision with them. Any other animal is likely

to get out of the way, and even if it did n't, very little harm could come to the rhino.

But with man it is different, particularly with the white man, for the rifle carries just as much power as a rhino does, and it can be used much more effectively. It is likely that the result will be that the dumb old fellows will never learn before it is too late, and hunters will go on shooting them until there are none left to kill, merely because they are so incurably inquisitive.

But it is not entirely fair to lay all the rhino's rushes to mere inquisitiveness. When such an animal comes storming along with his head down and his tail up, with you as his goal, it matters little whether he intends merely to find out what you are or whether his desire is to eliminate you at once, for the result of such a rush is likely to be the same in either case. Consequently, it seems to me that if the hunter happens to be in the line of a rhino's rush, he may most legitimately say that he has been charged, though fortunately for both the hunters and the rhinos, every rhino seems subject to sudden and abrupt changes of mind, and very often he will change his course when he has almost succeeded in running the hunter down. But that is not invariable, and more than a few hunters have been killed by the powerful beasts.

That first day with the rhinos gave me something to think about. I realized that we had been exceedingly foolish to go out and face the beasts with no more understanding of their natures than we had, and I determined then and there to make a study of them. The result was that I spent many days watching them with my glasses, in order that I might get some idea of their idiosyncrasies.

It did n't take me long to learn that a hunter of rhinos can tell a good deal by watching their ears and tails. Just as a horse puts a lot of expression in his ears, so does a rhino. To see one of the old fellows half asleep in the shade of a tree is an interesting sight. Half a dozen tick birds may be perched on his back, picking the ticks from the folds of his heavy hide. His head will be drooped, and his half-blind eyes apparently almost closed, while his ears will have no rigidity whatever. They seem almost to droop. His tail, too, is motionless, or nearly so.

But at the faintest sound — or at the merest trace of scent — his whole attitude changes. If the sound or the scent is very faint and does not suggest any particular danger, his appearance will change very slightly indeed, so slightly, in fact, that to an inexperienced observer there has been no change. Yet if one looks closely, he will see that the ears are no longer listless. They are alert, and probably they are moving. First one and then the other will turn, as if he were listening carefully. If the sound is repeated so that he gets a definite idea of its direction, both ears will turn toward it, and through one's glasses one can see his ugly old nose wrinkle as he dilates his nostrils in his attempts to catch or interpret the scent.

If he becomes suspicious, his tail will begin to twist and he will snort strenuously. Then he is likely to move — running a little this way and then that. His snorts become louder, and obviously he is becoming more and more disturbed. When he catches a particularly clear scent, he is likely to start in real earnest. His absurd little tail will go up, like a battle flag being raised. His head will go down, his snorts become real threats, and his short, sturdy legs will carry him along at an amazing speed.

Now is the time. He is charging, and nothing can successfully stand in his way. His ungainly body is one solid mass of bone and muscle and sinew. He goes through tall grass and bushes as if they did not exist. He is determined to make his way straight toward whatever it is that has disturbed him. He does not go as fast as a horse can trot, but he goes far faster than a man can run. It would be simple for him to catch any man on foot, were it not for the fact that his brain is so slow. I have actually dodged the old fellows, although I must admit that it is exciting sport and I have never done it for pleasure.

The first one I ever dodged nearly got Dugmore and me, and almost got one of our natives as well. It all came about because prior to that time I had successfully turned one with a charge of buckshot from a shotgun, which gave me undue confidence in the efficacy of that method of driving them off.

As I have explained, we did not desire to kill any more animals than was absolutely necessary. So I was forever trying to figure out what I could do to turn the charges of rhinos without doing them any serious harm. One result of my cogitations was that I figured out that a good load of buckshot would sting a rhino pretty smartly, but that it could not injure him more than very superficially. After a successful trial of this new method, in which it worked perfectly and turned a charging rhino at about sixteen or eighteen yards, I determined to use it exclusively in the future.

However, I wanted a little insurance in addition to what the buckshot could offer, so I loaded one barrel with buckshot, and the other with a ball cartridge. So armed, we started off one day, after we had been in the field something less than three weeks.

We had been fairly successful in the Game Reserve, and were on our way back toward the railroad station at Kiu, traveling through the high grass with a Masai askari, or fighting man, in the lead. This askari was a handsome specimen of humanity, as many of the Masai are, and he was a fine sight as he strode along with his blanket draped over one shoulder, with his head covered with a tight-fitting cap made of the stomach of some animal, with his shining black shoulders glistening in the sun, and with his long spear tipped with its three-foot point.

Dugmore was following the askari, and I came third, with the twenty native members of our safari strung out behind, burdened with all our boxes and bales and packages. We had progressed for a mile or so in this manner when the askari in the lead stopped suddenly and held up his hand.

"Kifaru!" he whispered, and there ahead of us, not twenty yards away, and directly in our path, lay a huge kifaru — a rhino — sound asleep in the grass.

Instantly we were as busy as kangaroo mice in a grass fire. Our porters precipitately dropped their loads and took to their heels. Dugmore reached for his camera and edged around to where he might snap the rhino if he charged. And I, having unloaded my gun for fear my inexperienced gun bearer might shoot some one accidentally, grabbed it from him and loaded one barrel with buckshot and the other with ball. I felt at my side too, and loosened my revolver in its holster, though why I thought of my revolver at such a time I do not know.

Of course, with all that activity about, there must have been some sound, which the rhino instantly caught. He was on his feet in a flash, and there was not the faintest movement that I could detect between the time he got up and the time he got under way. Dugmore was focusing his camera, and the Masai askari had his spear ready for action, though I remember thinking at the time

that such an antagonist was not to be stopped by a spear.

This time I did not wait for the sound of Dugmore's camera, but let go with the charge of buckshot, hoping to turn the infuriated animal. But he was no more affected by the shot than he was by the sound of the gun. There was not the faintest sign of hesitation, and he was getting far too close. I fired the ball cartridge, and still he charged. I seized my revolver and leaped to one side as he came, firing into his face as he passed within six feet of me.

His momentum carried him by as I turned to face him, but he instantly wheeled and rushed at me. Again I side-stepped and fired into his face, and again he went by with a rush and wheeled. A real battle was on, and for a few quick moments it was nip and tuck. Each time he rushed I side-stepped and pulled the trigger until six shots from my revolver were fired into his head, but with no more effect than to make him shake his head as if a bee had stung him. At the last rush, with my revolver empty, I dashed clear to one side, wondering as I went what was next to happen.

The askari was directly in the line of charge this time, and I fully expected to see him killed. He waited until it almost seemed that the big horn had him, and then leaped lightly aside. The rhino turned and went for Dugmore, who had snapped one picture and was vainly endeavoring to change his plate. He was weighted down with

the huge camera he always used, and for a moment things looked decidedly bad.

Then it was that the askari went into action. He leaped through the tall grass, and drove his spear into the rhino's side. The wound was quite deep enough to attract the brute's attention, and Dugmore skipped aside. The rhino was bewildered by now, and turned again, charging off directly after the rapidly scattering safari, and after him scurried the askari, armed, now, only with his long knife. The rhino changed his direction once, and evidently caught a glimpse of the pursuing native from the corner of his eye. That, apparently, decided him. Certainly he was unaccustomed to being chased. Theretofore, undoubtedly, he had done what chasing there had been to do, and it may be that he did n't like having some one chasing him. Furthermore, he was wounded by eight different shots and by the spear thrust. He shook his huge old head and snorted, and then, with more speed than the askari could muster the old fellow blundered away. Nor did we try to stop him.

We paused for breath and to permit the porters to collect their loads. The askari found his badly bent spear in the grass, and for a few minutes we were busy bringing order out of chaos. But hardly had we gotten the safari straightened out again before we saw another rhino hardly four hundred yards away. I looked narrowly at Dugmore, but he, apparently, felt as I did — that we had had

quite enough rhino for one day. I doubt if any rhino was ever treated with more consideration than was that new one we sighted. It was not our purpose to interfere with his repose, and we crept away from him as a tired father might creep away from the crib of a wakeful infant who, at three A.M., has momentarily fallen asleep.

Since those first few weeks, when Dugmore and I hunted rhino in the vicinity of Kiu, I have seen scores of the homely beasts, and feel that I have gotten fairly well acquainted with them. Naturally, we were convinced, after being charged so many times near Kiu, that all rhinos were cantankerous beasts, always hunting trouble. But never have I seen, in other parts of East Africa, such unnecessarily troublesome rhinos as we first met. It seemed that every rhino we encountered during our first month in the field, was certain to make trouble for us. On several occasions we faced two or three charges in a day, and on one occasion had to stand three charges before ten o'clock in the morning. It may be, too, that others would have charged us that day, except for the fact that we decided to give it up and go back to camp.

Rhinos were thick in the neighborhood and I have no theory at all to account for their disagreeable dispositions, for they were in the Reserve, where they were seldom hunted. Elsewhere I have seen almost as many rhinos, and on one occasion I saw twenty-two between noon of one day and noon of the next while we were on the

march. Yet, in that case, not one charged, although we passed so close to some of them that we attracted their attention. On the other hand, sometimes they do not need anything more than a scent to set them off.

On one occasion we saw a rhino that we very carefully avoided. He had not seen us, I am certain, but as he was slouching along he came across our trail. Instantly he caught our scent, and his lack of concern disappeared. Up went his head. Up went his tail. He snorted and pawed around. He trotted this way and then that. He charged off down our trail until he was tired of that, and then turned about and charged back with the utmost energy. But, at last, he blundered off to one side, and then, apparently, promptly proceeded to forget all about the scent that had upset him. Two minutes later he was drowsing in the sun again, as if he had never been disturbed.

There are, of course, two species of African rhinos. They are popularly called the "white" and the "black", though how they ever got such names I cannot tell. Rhinos, of course, like to wallow in mudholes, and it may be that the first "white" rhinos seen by white men had been wallowing in white mud. I have seen "red" rhinos and "white" ones and "black" ones too, but each of them got his color from his last mud bath. As a matter of fact, all rhinos are a kind of elephant gray in color. The differences between

the "white" and the "black" are not in color, and to the untrained eye there might seem to be little difference at all. The differences, though, are sharp.

The white rhinos are fast approaching extinction. They never were numerous, and because they are usually somewhat larger than the black variety, sportsmen have been most desirous of getting them. The major difference between the two varieties is in the head. The white rhino is a grass-eating animal, and has a broad, square lip, which makes a very efficient mowing machine. The black rhino, on the other hand, has a short, prehensile upper lip unfitted for short grass, but admirably designed for browsing on bushes and plucking tufts of grass. There are other differences between the two, but they are not numerous or great. The white rhino's head is longer, and more massive. Both are armed with double horns, which are radically different from the horns on most other animals. In reality the horns of a rhino are not horns at all, and are not connected directly with the skull. Instead they are highly compressed masses of hair or bristles, and are attached to the flesh very much as are the nails of a man's fingers. Bony knobs on the skull underlie the bases of these horns, but the connection between the skull and the horn is not direct.

There seems to be a popular idea, too, that the animal is plated. This belief has apparently grown up because the heavy hide is marked by deep

wrinkles, permitting the animal to move without stretching and flexing the heavy sections of the hide. In reality the hide is less tough than it appears. It can readily be cut, for instance, with a sharp pocketknife, and presents no particular opposition to a bullet. It is thick, of course, sometimes as much as an inch, but it is far from being armor, although it is sufficiently tough to keep hyenas and jackals, when they find a dead rhino, from making their way through it, except beneath the belly where the skin is thinner, or in a few portions of the body where the thinner skin of the deep wrinkles presents less resistance. This fact alone has served to set the stage for more than one harmless near-adventure,

On one occasion, early in my first visit to Africa, I saw, while making my way across the grass-covered plains of Kiu, a sleeping rhino. As yet I had not learned to let sleeping rhinos lie, and so I crept up toward him. I was exceptionally successful in my stalk, and finally approached to within about twenty yards without disturbing the beast in the least. I could not see him so clearly as I might have wished, but his big, bulky, dark gray back stuck up well above the grass, and I began to wonder what I might do next. I did not care to approach any closer, and now that I had come so close I had no particular desire to turn about and try to make my way off. So, for a moment, I stood there, trying to figure out some plan to awaken him gently.

I was able to see, now that I was so close, that for a wonder there were no tick birds about him. Had there been they would have flown up long before now, screaming like mad. I did n't want to shout at him, for I was perfectly willing to awaken him gently in order, if possible, to keep him from developing a temper. So I whistled very softly. There was no movement, and I repeated the whistle, a little louder this time. Still no move. So I whistled with considerably more energy, fearful now that the old codger would leap to his feet and charge me at once. Still no move. I shouted, and still he slept, and then, seeing a small stone at my feet, I stooped quickly and picked it up. I hesitated at first as to whether to throw it or not, but my courage was growing, and I tossed it in a high arc so that it lit on his ribs. Before the stone had reached its mark, I was alert, with my gun aimed, expecting certain action, but to my amazement I heard a strange hollow sound when the stone struck, and still there was not the faintest sign of movement.

Still I did not understand it, but I circled about, and edged a bit closer, until I made out, through a place where the grass had thinned, that there was a hole in his stomach and that he was nothing but a shell. Having convinced myself that he was very dead, I approached him, and found to my amazement that he had been dead for weeks—perhaps for months. The jackals and hyenas and vultures and ants had long since eaten everything

that they could make an impression on, leaving nothing but the skeleton, over which was still stretched the semi-mummified hide. They had been unable to penetrate the thicker portions of the hide, and so had wisely entered the cavernous body through holes that they had made in the throat and the belly. But the dryness of the season and the heat of the sun had more or less mummified the remains, and I had come upon a shell that had all the appearance — even at a distance of a dozen feet — of a living rhino peacefully napping there in the grass, especially as the dead rhino had fallen, as they usually do, into exactly the same position that a sleeping rhino takes.

We saw several of these mummies later, and, as a matter of fact, felt sure that the rhino that charged us so energetically only to be driven off with shotgun, revolver, and spear, was one of these shells. Luckily we had made enough noise to awaken him and to discover our mistake in time, for we might have blundered even closer in the belief that we were perfectly safe.

It seems strange that Dugmore and I should have been charged so often while we were in the Kiu district, and that of all the scores of rhinos I have seen elsewhere I have never been charged but once or twice, but it only goes to prove that animals do not follow rules. Most animals of Africa are far more intelligent than rhinos, yet even these old dunderheads have more or less individuality.

I have often been asked what this or that animal will do under certain conditions, and while I find that I am likely to generalize (it seems a natural human weakness), I do try to point out that there is no telling. If one should ask what a business man or a scientist or a doctor would do under certain circumstances, the question to ask in return is obviously, "What particular business man or scientist or doctor?" With that answered, one might be able to prognosticate. To a certain extent that applies to animals. If one asks what a rhino would do under certain circumstances it is not accurate to generalize very far. A particular rhino might be perfectly happy and contented, or he might have a toothache or be troubled with nervous indigestion — although I suspect that such a disease is not for rhinos. Now obviously a contented rhino is less likely to react unfavorably than a thino with the toothache. Following this line of reasoning I have always been tempted to suspect that the rhinos of the Kiu district were all either suffering from some painful or trying ailment while we were there, or were the scattered members of some family whose forbears had specialized in bad dispositions.

But to be somewhat more serious: There is one rule that one should invariably follow when rhinos are about, and that is to expect the worst. Play safe with rhinos, as with other game, and one need not be surprised when, as is certain to happen if one keeps at it long enough, some old

fellow proceeds to attempt a charge that necessitates some defensive action. But that does not mean that all hunters should do as one man I met admitted that he did.

The very first rhino he ever met charged him—and, what is more, nearly got him. The result was that that hunter developed a peculiar antipathy to the clumsy beasts, and told me that he had killed every rhino that he had seen since. He had twenty-five to his credit, or discredit, and did not seem to realize that he was guilty of inexcusable conduct. To snuff out the life of those huge beasts, with no more reason than he had, when Nature has made their growth so slow a process is, to my way of thinking, downright criminal. I have admitted that I have shot my share, and I am sorry, but I have never shot them save in defense of myself and others.

I doubt if any one can be sufficiently careful in the rhino country to be able to steer clear of dangerous situations in which these animals play a prominent part. For instance, Dugmore and I, after we had left the Reserve, were trying our best to take flashlight photographs of lions at night. Nowadays one can obtain excellent flashlight apparatus that will almost invariably work when the bait is touched, but the apparatus we had seldom worked automatically. On two occasions we actually had animals roll on the string that was supposed to set off the flash, without obtaining any results at all. After an endless

number of failures we decided to build sturdy thorn bomas — or blinds — so that we could operate the cameras with electric wire running to them from where we sat protected from the lions by our heavy tentlike structure of thorns.

The idea was excellent, but because we had seen no rhinos for some time, we completely left rhinos out of our calculations. The result was that we built an excellent *boma* in which we would be fairly safe from lions. We utterly neglected, however, to think of the fact that a rhino, with one toss of his head, could hook the blind from above us, or, if he cared to, could charge through it with the utmost ease and without even any discomfort, for thorns make mighty little impression on his heavy hide.

With our boma complete, and with our cameras set up, we waited for dusk, and then entered the boma, sent the natives back to camp, and began to hope that lions would come about and tackle the zebra we had killed for bait. The night grew darker and darker, until, at last, not the faintest thing was visible against the background of water hole and trees. Had some animal appeared against the sky line we might have made him out through the small opening in the front of our boma, but in any other direction we were absolutely blinded, not only by the darkness, but also by the fact that we had been very careful to make our boma very, very thick.

The hours passed uneventfully, save for a lion's

roar in the distance now and then, and for the other night sounds that are common on the African plains. Then, without the slightest warning, we heard the rush and the snorts of a rhino. There was no doubt about his being close to us, even though we could n't see him. And he had our scent. We grabbed our rifles and turned about, realizing all too suddenly what a hopeless position we were in. In front of the *boma* was our lion bait, and a lion might even at that moment be stalking it. Now, behind our boma, through which we could not make out a thing, there was a rhino, snorting and running up and down, won-dering whether or not to charge us. We dared not leave the place for fear of bumping into a lion. We had no means of seeing the rhino and consequently could not shoot him in order to prevent his attack. So there we sat, with our backs toward the lion bait, caring less than nothing whether or not lions should approach the zebra, but holding our rifles ready and expecting every moment to hear the rhino coming even closer. It seemed as we sat there that he was too close as it was, and the next morning we found innumerable footsteps within thirty yards. But what we fully expected was to see the tip of his horn come at us through the thin protection of thorns, to see him toss the boma to one side and trample us or toss us to death.

I do not recall ever having been in a more terrifying situation. For half an hour we listened to that old fellow snorting and rushing up and down, sometimes closer and sometimes a little farther away, but never far enough away to relieve the strain. For half an hour we sat there with our guns cocked and ready, with our backs up against the thorn front of our shelter, hoping to be able to kill the old fellow instantly if he should charge, but far from certain that we could place our shots properly if he did.

Certainly we had no means of knowing what to expect, and rarely have there been two more relieved hunters than we, when finally the old fellow gave it up and wandered away. Just how dangerous the situation actually was I have no means of knowing. But there is no doubt that at the time we had all the sensations that extreme danger could give us.

On another occasion when Dugmore had left Africa and I was protecting Cherrie Kearton on what was probably the first motion-picture expedition that ever made cinema records of African game, I had a demonstration of how suddenly and unexpectedly these blundering beasts can appear.

I had been fortunate, on one occasion, to see a band of fourteen lions while I was hunting not far from the Kiu district, and having joined Kearton I told him of it. It was sufficiently unusual to be decidedly interesting, and one day, while we were passing the spot at which I had seen them, I pointed it out.

We were making our way along the bank of a dry stream bed, beyond which, about thirty yards away, lay the bushes, on the other side of which the fourteen lions had been. Kearton and I were in the lead, two askaris were following us, and after them came our camera boy, our gun bearers, and our water boy.

"There's the place where the lions were, Kearton," I remarked casually, pointing toward the clump of brush across the stream bed.

And even while I had my hand raised, I heard a commotion among the brush.

"Good Lord, they're there now!" cried Kearton.

At the same moment our camera boy dashed up from behind, trying to shout something. But if he ever got it out I did n't understand him, and then he was gone, at top speed, for the protection of a thorn tree twenty yards away.

Instantly two rhinos appeared from the brush, charging with all their speed. Every one of us turned to run, for they had come so quickly that we had no time to think. But after two or three yards I realized that I could n't outrun them, and furthermore, the tree nearest which we were was already sheltering the two askaris, the water boy, and Kearton. The result was that I turned to fire. But by then the two ungainly animals were down in the dry stream bed, and I could see only the tips of their horns and the tops of their backs. There was no target, and I had to wait. In a

moment they were climbing the bank, and I pulled one trigger. To my horror the gun did not go off! I pulled again! Another misfire! And by now both those rhinos were within five yards of me. I turned and ran, passing close beside the tree. I remember seeing Kearton kneeling and aiming.

"Fire, Kearton!" I cried as I passed, and I heard his gun go off. One of the rhinos was close behind me, I knew. How close, I could not tell, but hoping to throw him off his charge I changed my course to the right, to bring me behind the tree, past which, by this time, I had gone about three or four yards. As I turned I was reloading, and out of the corner of my eye I saw a fearful situation. Kearton had fired at the rhino that was after me, while the tree obscured the other. The rhino he hit hesitated for just the fraction of a second that made my get-away possible and then came on, while Kearton, thinking to dodge him, darted around the tree and almost ran squarely on to the other's horn. He saw his danger in time and stopped, just as the rhino went past not more than three feet away. Then, to their everlasting credit, the two Masai spearmen went into action. One was facing each way, and as the rhinos went past the tree each thrust with his spear. The attack was too painful and sudden to be resisted, and by great good fortune, the two rhinos parted, one going in each direction. The native who had thrust at the wounded rhino had merely struck the beast's horn, but the man had thrown all his

TRAILS OF THE HUNTED

power into the thrust and had bent fully three inches of the heavy spear until it formed a semicircle. The other man had done even better, and his rhino galloped off with twelve inches of spear in his neck. After half a dozen jumps the spear fell out, badly bent, and all of us, once we were certain that the animals were not coming back, sat down exhausted in order to recover our composure.

It is such experiences that make one decide, in time, that rhinos are beasts it is best to let alone.

CHAPTER III

LIONS!

It is interesting to watch the evolution of the average hunter. As a young man, keen for sport and for excitement, he often goes into the field and brings home unnecessarily large bags. He shoots females and males and young with fine lack of discrimination. A trophy of any kind is the breath of life to him, and sometimes he leaves a very long trail of amateurish trophies behind him before he learns how to hunt for real ones. But unless he is a natural born killer — and fortunately such hunters are rare - there comes a time when shooting animals is less interesting than observing them, and from a mere observer he turns gradually into a student. Cameras become more and more an important part of his equipment, and finally he will begin to tell of the remarkable picture he got of what might have been a world's record head, and he will actually delight in having let the animal escape.

I have seen many men go through some such development. Some there are who are slow to change, and others are not, but given time, most hunters follow a somewhat similar course. Some professionals seem never to change, and others grow to hate their work. But I suspect that the

one who remains unchanged is the one who never sees anything but the ivory of the elephant or the fur of the beaver that he kills. He is of that unfortunate type that cannot see the traits that make one come to sympathize with animals.

We museum folk are often charged with being killers, and many people criticize us for having such large collections. But one can smile at criticism as thoughtless as that. The American Museum of Natural History has, for instance, about a score of the skins of Virginia deer, including a few mounted specimens of these animals. Through these the Museum gives pleasure and information to hundreds of thousands of people who never in all their lives will have an opportunity to see the graceful creatures in their native wilds. But it must be remembered that some of those deer skins have been given to the Museum by hunters who have hunted them for pleasure, and that while the Museum has a score of specimens for scientific study and for popular presentation in mounted form, more than six thousand of these same deer are slain annually in Pennsylvania alone by hunters who are licensed by law to kill.

Furthermore, one will find that among the societies interested in conservation there are seemingly a disproportionate number of men and women from the staffs of museums. That the museums send costly expeditions to far countries in search of animals for their collections is true, but in no case are those expeditions urged to bring back mere numbers. Carl Akeley, in 1921, took an expensive expedition to Central Africa in search of gorillas. He shot five, although he might readily have gotten a score, and learning, as he did, that the gorilla is a comparatively rare animal, he immediately decided to try to get the Belgian Government, in whose territory these particular gorillas lived, to protect the animals. So successful was he that to-day the gorilla sanctuary is actually in existence, and the rare animals can no longer be hunted. Certainly the five lives that Akeley took were not too large a price for the gorillas to pay for permanent protection from the guns of hunters.

Now one thing more is true. The sport that lies in photographing animals is very much superior to that which lies in shooting. I have seen hundreds of animals that I could easily have shot, but of which I could not obtain a decent picture. So if one gets any pleasure out of pitting himself against an animal in an attempt to outwit him, the camera is infinitely more intriguing than the gun. And if excitement is the chief desideratum — well, my experience is that the camera increases it many, many fold.

In Africa there are only five really dangerous animals: lions, leopards, buffaloes, elephants, and rhinos. But one must not get the impression that merely because an animal is not dangerous he is easy to photograph. The contrary is often true. Rhinos, for instance, are easy enough to photo-

graph, if one will only risk waiting until they are close enough. But where Dugmore snapped plenty of close-ups of rhinos, he got none at all of giraffes. He did get a few telephoto pictures of the elongated creatures, but they proved far too clever to permit us to approach them closely.

To any one who carefully observes African animals must come the realization, in time, that they are extraordinarily clever. With the exception of the rhino they are very hard indeed to outwit. How they know the things they seem to know is beyond me, but their knowledge is obvious. For instance, if a native walks across a plain that is covered by herds of antelope, the creatures separate as he advances and close in behind him, leaving about him an open space with a comparatively limited diameter — say a hundred yards. But let a white man attempt the same thing, and

But let a white man attempt the same thing, and that open space is far more likely to be four hundred yards in diameter, even if he has carefully refrained from shooting anything in the district.

On one occasion we were having a lot of trouble trying to photograph hartebeest. These solemnly comical animals have been called "the policemen of the plains" because of the way they sight any danger and then, sometimes at considerable risk to themselves, so houseing and sporting about to themselves, go bouncing and snorting about in the vicinity of the danger, signalling every animal within a mile that something is not as it should be. So universal is this habit that any experienced hunter lies low when hartebeest



Flashlight Photograph by A. Radelyffe Dugmore

appear, if he is stalking anything he particularly desires to get.

Dugmore and I had been trying for several days to get some pictures of these solemn-faced clowns, but we had had no luck. Whereupon, I got a bright idea, and went out with my gun. True to form, a hartebeest spotted me, and proceeded to warn everything in sight, prancing and snorting not far away, stopping now and then to put his head on one side and look wisely at me, tearing around in circles, and generally notifying the plains that I was there. So I shot him, and with the assistance of the natives took him back to camp. Then, with the utmost care, I made a dummy of him - a hollow dummy, with a big hole in his belly into which Dugmore could climb. The whole thing was, we thought, very well done, and because the grass of the plains was almost waist high, Dugmore's legs were concealed as he walked along, carrying his perambulating blind.

At a distance it looked to me like a real, live hartebeest. Perhaps Dugmore's inability to cavort about with the dummy over him and with his camera concealed between the dummy's front legs might have seemed suspicious, but goodness knows there are plenty of solemn hartebeest. And certainly the head and horns were convincing, while the body was well formed, and being covered with the dried hartebeest skin, was exactly the right color.

Dugmore tried it out and was very optimistic. Without doubt he could get right in among the herds now, and photograph to his heart's content. And he tried it while I remained hidden at a distance and watched the result through my glasses.

Never have I seen a more complete failure. As Dugmore moved slowly toward the herd, every head went up and the creatures' suspicions were instantly aroused. Away they went, just as they had gone before, snorting and kicking, running about and frightening zebras and eland and everything else within a radius of a mile. How on earth they could tell so quickly that something unusual was coming I don't know. Certainly any white man would have been completely fooled, and I strongly suspect that any native would have been, too. But those hartebeest knew instantly, although Dugmore had approached them from down wind, so that they could not have gotten his scent, and he made no noise that could have carried to their ears. And I, whose job it is to mount animals in the most lifelike possible form for a big museum, had thought that I had done a passably good job, considering the limitations imposed by camp conditions. Yet those hartebeest knew. I have often been glad since that the mounted specimens in the museum are not meant for the entertainment and enlightenment of these clever and clear-eyed creatures. I suspect that they would laugh at our very best efforts, and point out the defects to one another.

But we had our troubles with more animals than hartebeest. Our equipment upset our plans, as well. It had been our intention to hunt with the camera during the day, and to set up cameras at night to be operated automatically by an electric system that would open the shutter, set off a flash, and close the shutter again, when the animals about a water hole or a kill should trip the trigger. But the flash failed time after time. On one occasion we found the tracks of a lion all about the string we had stretched. He had actually rolled on it, and had evidently played around for quite a while, but the flash had failed to go off. Sometimes we found the string broken, and very often tracks showed that it must have been touched. But it rarely worked. Consequently we were forced to use blinds, or bomas, again, so as to be able to sit up near the cameras, and press a button when we felt that there was a picture worth taking.

The result was that in the six months Dugmore and I were together we spent about fifty nights in bomas, and got a number of remarkably successful photographs, besides having several experiences filled with suspense and excitement. We photographed many different species around the water holes at night, but our experiences with lions were far and away the most interesting.

We had had some experience at night work before we seriously determined to try for lions. We had been in Africa nearly two months, by this time, and were camped beside the Theka River about forty miles to the northeast of Nairobi. Already we had managed to get several lion pictures, but we were looking for something still better, so we erected a boma, and killed a zebra for bait. We placed the zebra just twelve yards from the boma, set up three cameras, arranged our flashlight apparatus, and as dusk was falling, climbed into the boma.

We had already worked out a sort of division of labor, and Dugmore took the first watch, with the idea of calling me at midnight. I went to sleep promptly enough, while Dugmore sat with the electric button in his hand, watching as the darkness grew deeper and deeper. There was no moon, and at a distance of more than a few yards not a thing was visible. It was a lonely place, and I know from experience the feeling Dugmore must have had as he sat staring out into the night, trying to interpret every sound that came to his ears. That night, things began to happen early.

That night, things began to happen early. Without the slightest warning two lions bounded suddenly upon the zebra. It seemed, so Dugmore told me afterward, that they had stalked the carcass, for he had not the faintest notion that they were near until he saw a blurred movement in the darkness and heard them land on the bait. He reached for me and shook me gently. Luckily I awoke without a sound, and as I peered forth I could make out the indistinct forms of the two lions as they moved about the zebra. I reached

for my gun (Dugmore already had his in his hands), and he pressed the flashlight button. But the flash failed to work. The silence and the lack of the flash were more of a surprise to us than the boom and the flare would have been, and it took us a moment to recover ourselves. The lions were still beside the zebra. We could hear them plainly as they tore the flesh, and it seemed to be up to us to get rid of them. Our boma had seemed remarkably sturdy that afternoon, but we began to recall the weak places in it, now that two lions were within twelve yards of us.

We aimed as best we could in the dark at the moving objects outside, and fired together. There was a rapid series of growls as both lions disappeared, but we could not tell whether or not either of our bullets had told. We peered out, wondering what to do next, and as I strained my eyes in the dark, I was surprised to see a form standing a few yards off. It was motionless when I first saw it, but immediately it began moving silently toward us. It was not a pleasant situation. That at least one of the lions had been no more frightened than that suggested that we might have trouble, and it is no particular pleasure to be stalked by a lion when one is protected only by an irregular pile of thorny branches which might readily become as much of a trap as a protection. Seeing only one of the pair, we thought that we might have killed the other, but we

could not be sure. However, the range had been so short that we could not believe that we had missed, despite the fact that we had been unable to see our sights.

But it was certainly up to us to fire again for the lion was creeping closer every moment. Dugmore fired first, and I followed immediately. The flashes of the guns lit up the immediate vicinity as a tiny flash of lightning might have done, and when we looked again we could see nothing whatever. There was not a sound. There was no sign of the lion, and for fifteen minutes we sat there, wondering just what had happened. But we could make out nothing, and listen as hard as we might we could catch no sound that we could interpret. But at last we decided to take a chance and go out to fix the flash, for we did want to get any picture that might present itself later.

It was a bit trying to creep on our hands and knees out of our shelter into the open, not knowing where the lions had gone, or what they might be planning. We lit our lantern and went one at a time while the other stood guard. We held the lantern high above our heads, we looked about, but could see nothing, and so moved slowly toward the flashlight apparatus. We stopped by the zebra and looked about again, only to have our hearts leap into our throats, for there—hardly five yards from us—crouched a tawny body in the faint rays of our lantern. I covered him with my gun instantly, and both of us stood

perfectly still. I tried to see the animal's tail, for a lion ready to charge lashes his tail slowly back and forth, but in the darkness I could not be sure. Still, there was not the slightest sound, and I could detect no movement. With all the caution that we could manage, we advanced toward him and circled to his rear. At last, while I kept him covered, Dugmore reached out and poked the lion with the muzzle of his rifle. The beast was stone dead, with a bullet hole in his forehead. Without further delay we pulled him aside, reset our cameras and tinkered for a moment with the flash. It was with a real sense of relief that we climbed back into the boma, hurried in our movements by a frightful roar from the river bed only a little distance off.

During all the rest of the night we crouched there, wondering what next to expect, for two lions, now, were roaring from the darkness close by. We could not see them, but their roars were more than enough to keep our nerves on edge. The sound seemed to fill the whole valley, and to reverberate among the hills. Even at that it was n't the sound so much as the vibration that was noticeable. It had much the same quality that the bass notes of a large pipe organ have, when the vibrations creep up the walls and along the beams of a lofty church. We could plainly feel the air quiver as each awe-inspiring roar rolled toward us. It was some time before the sounds ceased, and it was with more than a little relief

that we watched the dawn appear and climbed out of the *boma* when daylight had come.

We photographed the lion, and found that Dugmore's bullet had brought him down. I had missed completely, but he had dropped in his tracks. We strengthened that *boma* considerably before we spent another night in it.

That shooting lions from bomas is not the sporting way to hunt them is generally conceded. With that idea I am in accord, for certainly it is a one-sided affair. But photographing them from a blind is, in my estimation, quite another matter, especially when, from time to time during the night, one climbs out through a very small and thorn-encircled opening in order to renew the flashlight powder or to remedy something that has gone wrong.

The bomas we used were built of sticks lashed together in the form of a teepee and covered with "wait a bit" thorns. These thorns are remarkably like fishhooks, and from the way they catch and hold one comes the name. Once the "teepee's" frame was erected, thorns were spread about it and lashed fast. On these still other thorns were thrown, leaving one small opening barely large enough to permit a man to crawl through on his hands and knees. Having covered the whole structure with a sufficiently thick covering of thorn bush, we had our native boys beat the branches with sticks, forcing them together. The natural hooks became enmeshed, and the whole structure

was pretty sturdy. Of course a rhino could have charged through it with impunity, or a lion could have torn it to bits, but we banked on the well-known habit of animals of avoiding thick bushes. They apparently realize that an attack on such a place might mean a hard bump against a covered boulder, or a fall into a hidden pit, for almost never, unless fleeing from some sudden danger, will any animal rapidly penetrate a heavy growth through which he cannot see. And of course we made our *bomas* thick enough so that the animals could not see through them.

Having had such a structure erected, we entered it at sunset, and prepared to spend the night. Our cameras and flash apparatus were outside, focused on the bait we had prepared or on the water hole at which we expected animals to drink.

We made it a point to remain almost utterly silent, and we almost never lit a light. We arranged our supplies according to a plan worked out in advance, so that we could put our hands on anything we wanted without rattling tins and without any delay. Our lunch, our lantern, our flashlights, our ammunition, our vacuum bottles—all were placed in order. We covered the ground inside the boma with a thick layer of grass, over which we spread a blanket. That deadened small sounds, and made a place for us to sleep. Then almost invariably one of us kept watch while the other slept.

I shall never forget some of the nights —

especially the moonlight ones. It is true that it was on the darkest nights that we had our best luck and our most surprising adventures, but when the moon was shining we could get a view of African wild life as it is really lived. Civilization has made of night a time to sleep. Not so Nature. Never are animals more alert than at night. is then that the king of beasts feeds. The leopard ranges abroad and takes his toll. Hyenas, which are rarely seen by day, stalk abroad, curdling one's blood with their hideous howls. Jackals bark. A surprising number of birds are awake. Strange sounds that come from no recognizable source reach one's ears. Insects chirp. Twigs snap beneath feet that are careless. From the water hole near by comes the booming of frogs. Then, from the distance, comes the roar of some lion that has fed, and with that sound every other one ceases. The myriad of night sounds fade utterly, and listen though you may, not a sound comes to your ears. Where formerly a hundred noises were mingled in the night, now there is not one.

The lion roars again. Silence follows — utter and complete silence. You listen almost painfully hard, but the only sounds you hear are your own bated breathing and the ringing of your straining ears. It is strange how loud that ringing seems to grow. I have often felt that it was nearly deafening — high, insistent, piercing. It almost makes one think that everything in the neighborhood can hear it too. Off in the distance you may



Flashlight Photograph by A. Radclyffe Dugmore

hear a rush, a snort, perhaps a cry of pain, and you know that some animal has fallen before the rush of a lion that has silently been stalking his prey. He will not come to your bait to-night. But, if you are patient, he may come to your water hole later. His majesty always drinks deeply after a meal.

The lesser night sounds have faded utterly. Every creature seems to know that a lion is near, and none wishes to intrude. It almost seems that the very birds and insects fear him — at night. And yet, during the day I have seen lions stalk majestically across plains covered with game that did not run at their approach. They parted, it is true, to let the lions pass uncontested. But they did not run. There is some law of the animal world, apparently — some agreement — that insures comparative safety from the lion during the day. That lions have made kills while the sun was up I have heard. Men have seen them, but it is rare. I have never seen it, nor have I seen a leopard do it.

Perhaps that is fortunate. Most animals are nervous creatures. They will leap instantly and run wildly at some of the faintest sounds. Obviously they are frightened at the moment — highly keyed and very nervous. But fortunately for them they calm down quickly. Otherwise every animal would be a nervous wreck. If a person can imagine himself walking down the street ready at any instant to leap aside in order to avoid sudden

death—if he can imagine that fear dogging him not merely while he is on the street, but actually when he sits at his fireside or while he is asleep, he can get some notion of the nervous strain under which the average animal lives. And yet, with all that strain, they manage to throw it off whenever danger is not immediate.

But the nervous strain is likely to affect the watcher in a boma. That a lion is dining not far away is a certainty, though for two mortal hours not a sound may have come to the listener's ears. The ringing has grown deafening. Even one's heartbeats seem almost like the sound of a muffled tom-tom. Then, with startling suddenness. a twig snaps. The tension is redoubled, for there is no telling what it means. Perhaps a twig has merely fallen from a near-by acacia tree. Perhaps a field mouse has inadvertently made the sound. On the other hand, the lion may have left his kill and may, this very moment, be stalking about the boma which suddenly seems ridiculously fragile. Or a rhino may have wandered past. You peer out with your rifle ready, and with the flashlight button held tightly in your fist.

At first you see nothing. Then the furtive form of a jackal appears, hesitant and slinking. He pauses warily and looks about, fearful, it would almost seem, of everything. He sneaks forward toward the bait and looks about again. He starts and almost runs away when another jackal appears. For a moment the two eye each other

suspiciously, and finally they get up nerve enough to approach the bait and begin their fear-interrupted meal. For several minutes they feed, glancing about nervously. Then, without warning, they dart away into the darkness.

You peer out, but can see nothing. You wonder what has frightened the slinking creatures away. Then from the darkness appears a larger animal. You grip your gun tightly. Lion? The beast approaches the bait, slinking somewhat as the jackals did. No lion approaches with such an air. You hear the powerful jaws snap greedily and know the newcomer for a hyena. He feeds hurriedly — fearful, as the jackals were — and you can see the jackals sitting against the sky line, afraid to join the fearsome brute about the bait.

There is a sudden rush, and the hyena is gone. The jackals, too, have disappeared, yet you see nothing, nor does a single sound come to your ears. For minute after minute you wait. The ringing in your ears is deafening again, and suddenly you see a lion standing a dozen yards away. How he got there you have no means of telling. He has been noiseless.

That he has your scent is perfectly obvious. Lions do not miss scents as close as that. It may be that he has made a circuit of the *boma*, coolly trying to make you out. Finally, quite conscious that you are there, he has decided that he will get his fill, no matter who you are. Having decided

that, there is no danger that a lion fears. You press the button, and there is a blinding flash. You aim your gun, unable to see, and you hope that the lion has retreated, which he probably has done, disturbed by the boom and the blinding flash. And now the flash needs to be renewed, else no more pictures can be taken that night. Your companion has been startled into wakefulness by the commotion, and after waiting for fifteen or twenty minutes you decide that there is no good end to be served in waiting longer to renew the flash.

Now comes the decision as to who is to crawl first through that thorny opening. Quite frankly, neither of you is particularly anxious to do it, for one is very, very helpless on one's hands and knees, half out and half in a wicked circle of thorns. But then, neither wants to show the white feather, so at last it is decided. You push your gun out, while your companion kneels and holds his own above you, ready to fire if the lion comes. The thorns catch and hold you. It takes an endless time, and your imagination enlarges on a hundred possibilities. But at last you are out, and up. You stand guard while your companion crawls out, and a foot at a time, glancing meanwhile in every direction into the darkness, you make your way toward the flashlight holder. Your lantern has been lit, and you hold it high, but though its feeble rays light the ground immediately before you, they merely lose themselves



AN AFRICAN LIONESS TAKEN FROM A BOMA, OR BLIND, AT TEN YARDS

in the darkness a little distance off and make the blackness blacker yet. One of you stands guard, trying to look in every direction at once, while the other renews the flash. Then, with more haste, you return.

But it is strange. Leaving a boma in the dead of night is bad enough. But somehow it is easier to make that move with your head toward the possible danger than it is to return and face away from it. Your body seems to elongate to a perfectly ridiculous extreme. Head and shoulders get inside readily enough, but body and legs seem never to follow. The thorns catch again. You pull and twist and perhaps curse softly under your breath. When you finally manage to get inside, you straighten up suddenly, pulling that least protected portion of yourself to an upright position with exceptional alacrity.

Now you return to the breathless task of watching once again. The moon may have risen, and as it slowly lifts from the horizon an animal may move past it in the distance, silhouetted sharply for a moment, then disappearing as silently as a shadow. That is not uncommon, when one is watching from a boma, for the wise boma builder always places his protection so that he can look out against the sky line. Then he has some chance of seeing the animals as they approach. I remember seeing an ostrich, one night, striding slowly across the rising full moon, and as I watched, sixteen little ostrich chicks followed, for all the

world like some child's shadow pantomime upon a spot of light thrown on a sheet hung before a doorway.

And yet, despite the tenseness of watching from a blind, one can grow somewhat hardened. I learned to sleep quite soundly while Dugmore was watching, and at least on one occasion both of us fell asleep while a couple of lions were prowling about us. That was very, very careless, for there have been cases where lions, under such circumstances, have poked their heads in at the boma entrances.

On one occasion, while I was sleeping and Dug-more was watching, he suddenly realized that several lions were in the immediate vicinity of the boma. Here was a wonderful opportunity for some remarkable lion pictures, if they would all only get within range of the camera at one time. He wanted my help, yet he dared not awaken me, for fear that I, in awakening, would make a sound. Four lions were within three or four feet of the *boma*, and even the slightest sound might have frightened them off. So he let me sleep, while the lions moved stealthily about — six of them in all — and all much too close for comfort. They moved on, presently, and turned their attenthey moved on, presently, and turned their attention to their own kill of the evening before, near which we had built the *boma*. They undoubtedly knew we were there, but they defied us in order to get their evening meal. One of the finest pictures that Dugmore ever made, he got that night. When he believed they had moved towards the bait and away from the side of our little boma far enough so he could take a chance of waking me, he leaned over, shook me very gently, whispering in my ear at the same time, "For Heaven's sake, Clark, wake up! There are six lions about us!" And he pressed his hand over my mouth to indicate that I must not make a sound.

I moved with as much speed as possible, but with the utmost caution, and came to a kneeling position as I lifted my big gun. Dugmore then told me they had passed very close to the boma on either side of us, coming up from the rear, and that he believed they were now somewhere between us and the kill.

One has to be most careful when lions are approaching their bait or kill, for at such a time they are very alert and the slightest sound may make them suspicious. After they have arrived and begin to feed, you may be a bit more careless, as then they are making some noise themselves and have left suspicion behind. However, having approached us — and I believe they chose that course in order to investigate the *boma* — they became more interested in their meal than they were in us, with the result that they moved slowly on toward their kill.

Had all six of them come for us at once, two guns would have been little better than one, but lions are really quite decent and rarely attack unless they have been molested. But, of course, one is likely to lose sight of that fact when they are so close that one could reach out and touch them with the muzzle of one's gun.

On another occasion, when I was hunting in the foothills of Mount Elgon with Mr. and Mrs. Carl Akeley, John T. McCutcheon, the cartoonist, and Fred Stevenson, I was with Mrs. Akeley in a blind, and was on watch while she and the native gun bearer were asleep. I had been watching faithfully and intently in order to detect anything that might move. There was a new moon which gave quite a little light from the clear sky, and I could see anything within a radius of thirty or forty yards. This is trying work and one can not long stand the searching strain on one's eyes without relaxing by a turn of the head for a second. Having glanced away, I looked up again and there, standing beside the kill, was a magnificent big-maned lion. He stood majestically in plain sight, with his head high and turned slightly, looking straight at our boma. How he got there without my seeing him was a puzzle, for the ground about was clear of shrubs and grass. I carefully awakened Mrs. Akeley, whispering that her chance had come, for she had never gotten a lion from a boma.

I told her to get ready to fire and stood by to back her up if necessary. She pulled her trigger and instantly bedlam broke loose outside. The lion snarled and growled and threshed around furiously. That he was hit was obvious, but I could not imagine that he was hard hit if he could raise such a fuss as he was raising. I kept him covered and urged her to fire again, though she was cool enough and needed no advice. The lion was threshing about and we feared that he might charge us any second. Twice she fired, and I fired too, and then the lion sank to the ground and lay there motionless except for an occasional growl.

From time to time another lion, off in the distance, roared loudly, and in answer to each roar our wounded beast raised his head and sent a powerful answer. The air quivered with his every effort, and for the rest of the night all we could do was sit and hold our rifles ready, not wanting to deplete our limited ammunition for fear of an emergency. After a little while another lion approached - possibly the mate of the wounded one. I aimed and fired, as I saw the newcomer against the sky. There was a loud grunt and a scurry of movement, and we could see the beast no longer. But the two roared alternately throughout the night. Never have I waited so long for the dawn. That there were two lions close by we knew beyond a shadow of doubt. That one was wounded we knew also, and the other might be, too. It was with my heart in my throat that I crept through the opening as the early morning light came, and slowly rose to my feet. Despite the fact that Mrs. Akeley was at my back with her rifle I was much concerned, for with at least

one wounded lion very close at hand, I did not know whether or not to expect a charge the moment I came in view.

Mrs. Akeley's lion was lying fifteen yards away, still snarling, but with his back broken. The other lion was not in sight, but that did not mean that she was not some place near by, watching me. I made my way about the boma and then stood guard while Mrs. Akeley came out in order to kill her lion with a shot through the brain. An examination later proved that my one shot at the beast had missed. She had killed it without any assistance from me. But the other lion had disappeared. Whether I had hit it or not I am not certain, but I doubt it, for there was no sign of blood anywhere around. It is very likely that the lion that got away was the mate of the one Mrs. Akeley shot. That would explain why she had faithfully stayed by him until daylight.

It was not long after this episode that Carl Akeley and I were returning from tracking elephants along the banks of the Nzoia River through open country that was covered with grass up to our knees. Our gun boys were carrying our rifles, as it was now in the heat of the day and we were headed back toward camp with the expectation of seeing nothing. Certainly we were somewhat off our guard when, without the slightest warning, half a dozen frightful lion roars burst out all about us. I believe that I have never been so frightened as I was at that moment, for those

sounds were close, and instantly lions appeared, leaping in every direction at once. Obviously we had blundered squarely into a pack of them.

We grabbed our guns from the gun bearers, and then, as I raised my rifle to fire, I realized that I had taken my light rifle instead of my heavy one. I went cold all over, for I knew that a bullet from that gun would probably do no more than make some lion angry, so I held my fire. Fortunately Akeley had gotten his heavy rifle, and he let go at once at a rapidly bolting lioness. By that time I had recovered myself sufficiently to realize that the lions had been startled as well as ourselves, and that they were all bolting, so I took a chance and changed guns. But by that time every lion had disappeared. I suppose that there had been six or eight, and several of them had been within ten or eleven yards, but my recollection of the affair is that tawny streaks were shooting in every direction through the grass, while the roars were positively blood-curdling as they filled the air all about us.

An instant after Akeley had fired there was not a lion in sight, but the lioness had been hit — we were sure of that. We had seen her drop in the grass, and had seen the grass shake as she made her way off, into some bush below us. Then, presently, we heard growls, and knew that she was down near by.

It was hopeless to attempt to see anything through the thicket, so we had the boys throw stones in the direction of the sound to bring her out. But there was no more sound, and so far as we could see there was no movement, so we decided that the lioness had slipped away. We made our way toward where she had been, looking for signs of blood, and were somewhat startled to come upon her in the grass. Instantly bringing our guns to our shoulders, we made a hasty examination and found her dead. Akeley, with the one shot he had been able to aim at her, had struck her squarely in the heart, despite the fact that she was actually in mid-air when he fired. Considering our surprise and the rapidity with which the animal was moving, that shot was remarkable. Furthermore, it was fortunate for us that his one shot struck so perfectly, for had she been less effectively hit, there is little doubt in my mind that she would have charged at once. What actually happened was that there was another lion in the grass that we did not see, and when the lioness fell this second one moved off, coming into sight as the first one dropped and making it appear as if the wounded beast had continued on. And therein lies some of the dangers of lion hunting.

On another occasion when I was hunting impallas alone near the railroad about sixty miles from Nairobi, I went out one morning with my gun bearer, my second gun bearer who carried my camera, water bottle, and reserve ammunition, and a third native who was to carry any skins and meat we got.

We had been on the trail for an hour or so when I saw the herd that I was after. They were beyond a dry stream bed, which I decided to enter in order to be hidden from them as we approached. We managed to get into the stream bed, and made our way across, climbing the farther bank and passing through the low, tunnel-like openings beneath the bushes that grew on the bank. The herd was not far beyond the bushes, and I was trying to be quiet, but we must have made some sound, or they might have gotten our wind, for off they went before I got a shot. I handed my gun to my gun bearer, and we crawled out of the bushes and entered the grass that covered the plain. It was waist deep and very thick, so we could not move rapidly, but across its waving surface I could not see a sign of my impallas or of anything else. I paused for a moment, looking about and wondering how those impallas could have disappeared so sud-denly and completely, when I saw a number of large heads appear above the grass about twenty-five yards ahead. They were numerous and scattered, being on three sides of me, but for a moment I could not make out what they were. At first I thought they were some strange animals that I did not know, and then two or three grunted loudly and rose a little higher. My heart leaped to my throat. They were lions — at least a dozen, and perhaps fifteen of them. On three sides we were effectively surrounded and the bushes were

behind us. At first I had seen but six or seven of the animals, and then, one at a time, new ones bobbed up, each one giving that strange half-grunt, half-growl that sometimes presages a charge. I knew at once that we were at their mercy. We could not run and escape, for the bushes were at our backs, and to get through them we would have had almost to crawl on our hands and knees beneath their tangled branches. In two bounds almost any of the lions there could have been on top of us. As I had stopped, my hand had instinctively gone back to reach for my gun, and I felt it as my gun bearer pressed it against my palm. I grasped it, but I knew perfectly well that one gun could not stop that pack of lions. It might even bring on a charge that could only end in their wiping out the whole bunch of us. The result was that I determined to stand motionless, in the hope that I would not bring on the charge that I feared. I did not even lift my gun to my shoulder, although I could feel my gun bearer pressing it tighter against me, and I heard him whispering, "Pega, bwana, pega!" (Shoot, master, shoot!)

But to shoot would have been folly. I might have killed one. With good fortune I might have

But to shoot would have been folly. I might have killed one. With good fortune I might have gotten two. But I knew that if I wounded one, it might instantly charge and one or several might come with it. If they came our way, there was no possible way of stopping them in that short distance.

For several fearful seconds they stood there defiantly, and I expected a rush at any instant. As a matter of fact I had already given up hope. It was the one time during all my experience in the field when I felt that everything was over but the shouting. Then, fortunately, one of them growled suddenly and bounded away. It was a signal that set them all in motion, and for a moment the tawny bodies were leaping from the grass like a school of fish leaping from the water. In two or three bounds every one of them was out of sight, but during those bounds it seemed to me that there must have been scores of lions. Each one leaped high and when he landed he disappeared utterly in the grass. Then, when he leaped again, which he did instantly, he gave me the impression that he was a brand-new lion. They bounced away as I have seen tennis balls bounce when a whole box of them has been spilled out at once upon a court. Then I realized that they were not going to charge and I was vastly relieved. I even tried to count them as they left. But that was hopeless. Had there been three or four — even six or eight — I might have been able to get their numbers. But as it was, there were too many, and after they had disappeared in the grass and we had crawled nervously back through the bushes to a place of safety, I reached the conclusion that there were about fifteen. That I was not far wrong was proved a few days later when I met an Englishman

who had seen the same pack. He had been able to examine them from a distance with his field glasses, and told me that he had counted fourteen.

Quite properly, the lion is given credit for being the king of beasts. That he is courageous has been proved a thousand times. That he will not usually attack unless he himself has been attacked is proved not only by the experiences I have just related, but also by scores of similar stories. He is rarely a killer except when he kills for food, and even then he will often come back to his kill even when it is twenty-four hours old rather than kill again. That he is not particularly feared by other animals during the day is obvious to any hunter who has seen him making his way within easy striking distance of antelopes and zebras, which do not seem to take particular exception to his presence.

And his strength is enormous. One need no more than hear his roar to guess that, while one need only examine the foreleg of a dead lion to be convinced. His huge muscles and his powerful claws are almost never obvious when one sees him in a cage. Yet a friend of mine — Alfred Klein, who has hunted Africa for years — once told me of seeing a lion leap suddenly in pursuit of a zebra. For a few seconds they galloped along at full speed, until the lion had approached the zebra's side. Then, instead of leaping upon his quarry, the lion merely raised his forepaw and slapped the zebra on the neck. He did not even

use his claws, and yet he knew perfectly that he had struck hard enough. For another jump or two the zebra continued before it collapsed. The lion, on the other hand, slowed up, and turned away from the fallen animal, waiting patiently and making no further attempt to assure himself of his dinner. When the zebra had crumpled to the ground, the lion slowly approached. At this point Klein stepped in and shot the lion.

With the lion out of the picture an examination showed that the lion's blow had not broken the skin on the zebra's neck, but for the space of several square inches the flesh beneath the skin was bruised, and from that blow the zebra had died within a very few seconds, probably from a dislocated neck.

It is this huge strength that makes a lion dangerous. Furthermore, even a perfectly placed shot through the heart will not always stop him immediately. Akeley's remarkable shot at the lioness had been through the heart, and she had died at once, yet others have been shot similarly and have charged home with enough strength to maul their enemy. So, when a lion charges, one has need to shoot both rapidly and accurately, and even then there may be enough strength left in the courageous animal to reach the hunter and deliver that one telling blow before the mighty muscles fail.

CHAPTER IV

ELEPHANTS

THE most interesting hunt on which I ever went was one that took place in the fall of 1909. I had been in East Africa since the preceding January, first standing guard over Dugmore while he made his extraordinary animal photographs, next playing the same part with Cherrie Kearton on his pioneer motion-picture expedition, and finally working "on my own." I had had a good deal of experience by that time, but though I had hunted many different animals, I had had little contact with elephants. So I was particularly pleased when Carl Akeley arrived at Mombasa and sent me a telegram, asking me to join him and Mrs. Akeley on a hunt after elephants and lions in the Mount Elgon district near the Uganda border.

I joined them at once, and found that their party was made up of themselves, John T. McCutcheon, the cartoonist, and Fred Stevenson. It was on the second of November that I reached Akeley, and ten days later we were in the elephant country.

At this time Akeley was collecting the elephants that were to make up the big group now at the American Museum of Natural History — the group that will form the centerpiece of the Akeley

African Hall when that new wing is finally completed — and Akeley was very desirous of having Colonel Roosevelt, who was hunting in that district at the time, shoot at least one of the elephants that would go in that group.

About two weeks after I joined Akeley we met the Roosevelt party. No sooner had we greeted them than Akeley broached his pet scheme to the Colonel, who whole-heartedly agreed, and together they went off after elephants. A group of ten had been seen in the vicinity, and there was every likelihood that Akeley and the Colonel would get what they wanted.

While they were out, Fred Stevenson and I were pottering about camp when Kermit Roosevelt appeared and announced that his father and Akeley had bagged four elephants, and Akeley had sent him with word for me to bring enough men and supplies to take care of the specimens.

To skin the average small animal is no great task, but an elephant is something quite different. So large is this huge animal that his skin alone, after it is removed, is apt to weigh a ton or more, and to get it off a specimen is a job that is not to be sneezed at. An elephant cannot be rolled around the way smaller animals can, with the result that no matter how or where he falls he has to be skinned as he lies. It is no easy task to take care of even one elephant, and with four I could perfectly understand why Akeley wanted help, for the weather in Africa soon makes its

impression on an elephant carcass, and the skin is liable to be spoiled if it is n't removed and salted at once.

The result was that I got under way immediately. Kermit and I went to the Roosevelt base camp, where we arrived just after dark, and while the porters and guide were making ready, we had dinner. It was about eight o'clock that evening when I started with my porters to find Akeley and Roosevelt, who had made a temporary camp beside the fallen elephants.

For two hours we stumbled along in the dark, thinking of all sorts of possible animals that might be about, and at the end of that time I began to realize that the guide was hopelessly lost. I cross-examined him to the best of my ability, but to no purpose. He certainly knew nothing of our whereabouts, and then I decided that we would have to try to get some signal from some place by firing our guns. Half a dozen shots got no reply, and I was about to make some sort of camp there in the open when I heard a gun in the distance. We headed for it, and found that although we had been marching steadily for more than two hours, we had merely gone in a circle and had returned to the Roosevelt camp.

It was about eleven o'clock by the time we arrived, and I found Kermit asleep. I awoke him and told him my troubles, and he gave me two more men, who had just come back from where Akeley and the Colonel were camped. With them

in the lead I started off again, trailed by my porters, and lighted by two lanterns. Where we went I have not the faintest notion, but in another two hours I was convinced that we were lost again, and so tried firing off my gun once more. But there was no response at all this time, and there was nothing to do but to remain where we were until daylight.

We built a fire, and lay beside it, but I did n't get much sleep. All about us in the night we could hear elephants, and my inexperience with the huge animals made my imagination work doubly fast. We could hear them trumpeting and grunting. Branches cracked as they pulled them from the trees, and altogether I felt very uneasy, for I had n't the slightest notion of what would happen if they started to move our way.

We needed no alarm clock to awaken us, and as soon as the east began to pale a little, I sent several of the boys up some trees in an attempt to locate ourselves. But look though they might they could not find a thing, and so we started on again, hoping to blunder across something that would give us a hint as to our location. The boys shouted as we made our way along, and before long we heard answering shouts. They turned out to be from Colonel Roosevelt himself, returning from the elephant camp to his base camp. He gave us our directions, and also another native to help us find our way. With this assistance we ultimately found Akeley. How he had

done it I cannot guess, but by dint of working all night himself, and by working all his natives as well, he had managed to get the skins off three of those huge beasts before we arrived, and the fourth specimen had proved to be unsatisfactory for his purposes, with the result that it was not skinned. I relieved him of the work of salting the skins, and by nightfall they were all safe.

During the day our camp fires started fires in the tall grass, and we had to stop work several times to keep the blaze back. Then, that evening, when the wind changed, the fire that had smoldered and crept away from us during the day turned suddenly and came toward us at a furious pace.

It was beautiful to see the long line of fire as it leaped and crackled, sending out its flickering red and yellow tongues before the breeze. But we had little time to admire its beauty. It had come almost without warning, and we barely had time to light back fires and keep it from burning us out of camp. By the time we were through fighting it, half the natives in camp had painful blisters, and every one was black from the blowing ashes.

Colonel Roosevelt appeared again on the following morning, thinking to find some lions about the elephant carcasses. There were no lions, but he took a photograph of a particularly gluttonous hyena that had not been content merely to feed on one of the mountains of flesh, but had actually crept inside the body, and there, having thrust

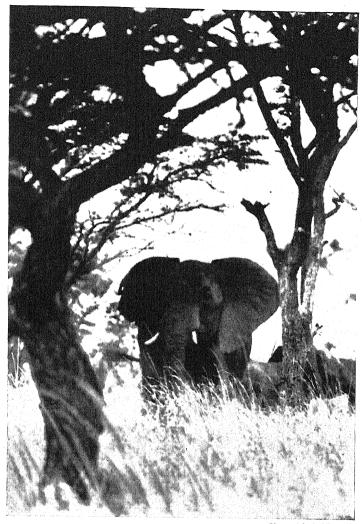
his head out through the wall of the dead elephant's stomach, found that the flesh closed about his neck, holding him a prisoner. Colonel Roosevelt was much amused at the animal's predicament, and approached to within six or eight feet in order to take a snapshot of the struggling creature.

It was not until a month later that I had my first real experience with elephants. I was out one day with Akeley, McCutcheon, and Stevenson, on the trail of some elephants that McCutch-eon had located. We started after a very early breakfast, and by eight o'clock had picked up the trail. We followed carefully for about two hours, and then made out the elephants on a hillside about a mile away. A native guide had seen them first, and he came silently back, pointing and whispering "Tembo, bwana." (Elephants, master.) The herd we had come upon was made up of three full-grown cows and three calves, but the one we picked out was a big cow that was separated from the others. We stalked her, and it was not until we had come to within about fifty yards that we saw that she had a young one with her. We paused, and Akeley decided to try for a picture, but as he was making ready, the cow became suspicious. She did not hesitate a moment after she had located us, but started at full speed, her ears out, and her intentions plain. I was somewhat in advance of the others, and stood with my gun ready, uncertain as to just what I should do. That Akeley planned to take a picture I knew, and so I decided to act as I had done with Dugmore and wait until I heard the camera click.

I have rarely had a more nerve-wracking wait. Rhinos seem to grow to enormous size when they charge, but that old cow elephant, with her ears spread fully ten feet wide, with her ponderous weight swinging along with amazing speed and ease, and with her little eyes fixed intently on us, seemed to grow to perfectly preposterous dimensions. I was nervous, but I knew that there was no good in running, and I knew, too, that both McCutcheon and Stevenson were armed and waiting behind me. What I did not know was what they planned to do. They had held a whispered conversation a minute before, but I had been too far away to hear what they said, and had not dared to join them. So there I stood, with my gun ready, listening for Akeley's camera to click.

I have often waited for rhinos to get within fifteen yards, but by the time that elephant was twenty-five yards away I was fairly praying for Akeley to snap his picture. Never before had I waited so tensely for a camera to sound, and when finally the click came to my ears, I did not hesitate for a fraction of a second.

She turned at my shot, but she did not fall, and both McCutcheon and Stevenson fired. She went down heavily then, and I, for one, took a long breath of relief. The calf stayed about, uncertain



Photograph by Carl E. Akeley

as to what to do, and Akeley got two excellent pictures of it, but finally it bolted, and we were at liberty to examine the dead cow.

That I had been nervous was proved by the fact that my bullet had passed through her ear close to her head. It was McCutcheon's bullet that had brought her down with a brain shot. It seemed to me at the time that she was as big as a house, and to miss her wide forehead the way I did only proved how inexperienced I was.

But now Stevenson told us that there was a good bull in the other bunch that had fled at the sound of our guns, and we went after them. By the time we had tracked them for three-quarters of a mile we saw them again, and we approached to within about a hundred and fifty yards to look them over. We waited, for they were coming toward us, and when they were within about fifty vards. McCutcheon fired at the cow that was leading. Instantly they all charged us - six of them — with the wounded animal still in the lead. It looked bad for a moment, and we all opened fire. The leading cow went down as puffs of dust flew from her head where the bullets struck, and the others hesitated. Then, with surprising speed, all of them bolted in various directions. The old cow that was down got to her feet and went off as rapidly as the rest. McCutcheon followed his wounded elephant, and presently we heard shots from a distance. Then, shortly, a native came from McCutcheon, saying that he

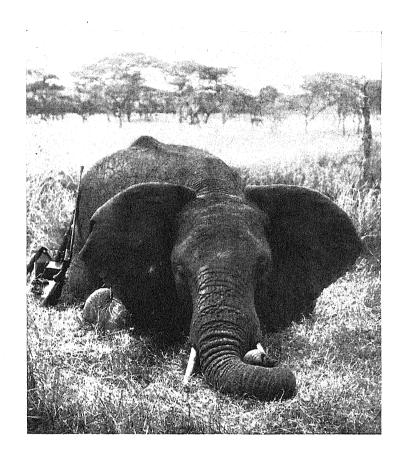
had brought down a young bull, which was just what Akeley needed to complete his group.

With that introduction to elephants, I had plenty of respect for them. To face them twice plenty of respect for them. To face them twice and to draw two charges was, I thought, rather a high average, and I determined then and there never to take any undue chances with elephants. Then, within a month, I did something that might readily have ended my hunting days forever.

I had left the Akeley party and was hunting with Godfrey Barker in the Kisii District, which lies along the eastern shore of Lake Victoria Nyanza, near what was then the German East Africa border. The country was one that hunters rately entered and there was a large herd of ele-

rarely entered, and there was a large herd of elephants that seemed never to stray from a triangle about fifty miles along each side. It was for that herd we were looking, for we suspected that we might obtain an unusual specimen among so great a herd, especially as they had not been shot over much.

The country was rolling and covered for miles with the most extraordinary grass that I have ever seen. It was fully ten feet high, and near the ground the stems were nearly an inch in diameter. Furthermore, the growth was very thick. The result was that we could not move through it at all, except by following the trails made by the elephants, and when we were down in those narrow canyons we could not see a single thing so much as ten yards away, for the grass was too



THE FIRST ELEPHANT THE AUTHOR ENCOUNTERED IN A CHARGE

She was shot by John T. McCutcheon just after Carl Akeley took the photograph shown opposite page 84

thick to see through and the trails twisted and wound about so that even along them one could never see more than a little way.

Fortunately the country was dotted with acacia trees, so, when we left camp and entered the grass, we rode our mules along some elephant trail or other until we decided that we had better see if any elephants were about. Then we would stop our mules and stand upright on the saddles, in order to see above the grass, for even as we rode we could make out nothing. Then, because even by standing on our mules we could make out little, we made our way from one acacia tree to another, and climbing into their thorny branches, we used our glasses in an effort to locate game in that amazing grass.

We had been in the field just a week when we saw elephants for the first time. We immediately halted, and taking our guides and gun bearers, we circled about in order to get down wind. How many elephants there were we did not know, nor could we see a thing through the grass, but we felt fairly safe, for we could hear them feeding and, what was still more reassuring, we could hear the rumble of their stomachs when we were fully seventy-five yards away. As any experienced elephant hunter will tell you, that is a sign that the animals are contented and have no suspicions. But it also meant that we were getting fairly close, so Barker and I sent our mules back with our boys, and went on alone. Then, in order to

get some idea of what it was we were after, I decided to climb a tree.

It is no easy task to make one's way up an acacia tree. The thorns are very numerous, and they are long and sharp, so that the hunter who is among them is forever finding himself caught and held, or painfully pricked. It is very difficult to get high enough in such a tree to see above such tall grass, especially as one must move very carefully and without noise. But I finally got high enough to see six or seven huge backs above the grass. I saw then that to get down in the grass again would be foolish in the extreme. One might actually walk squarely upon an elephant before one saw him, or the elephant might do the same in his turn, with disastrous results, so I decided to hold on to my thorny perch, especially as the elephants were feeding toward me.

Barker made his way off to another tree, and there the two of us clung, waiting until we could pick out the best specimen in the little herd. I tried to examine them with my glasses, but that did little good, for they were buried to the eyes in the grass, but I did pick out one old fellow whose back stood fully eighteen inches higher than the others. I had not definitely decided on him, for I had not as yet gotten a glimpse of his tusks, but just then he raised his head in order to pull down a branch from a tree, and his tusks showed clearly in the bright sunlight. He was exactly what I wanted. His tusks were large and were beautifully

matched, and altogether I thought that I would have to go a long way to find a finer animal. I kept my eye on him, and when he had approached to within forty or fifty yards, I fired

I knew that I had hit him, for I saw the dust fly from the side of his head, but he did not go down. Instead, the whole herd was thrown into instant action. They swung around, and hurried off, and I saw them pass behind an acacia tree that shielded them. Then I saw an opening in the branches, and knew that they would have to pass it. I waited—for to shoot through the tree would be merely to take a chance—and then, as they passed that opening, I fired again. Once more the dust flew from my old bull's head, he hesitated, and then down he went.

It was at that moment that I learned one of the most interesting things about elephants that I know. One can often observe animals for months—even for years—and miss some of their major traits. And thus it is with elephants. But at that moment I got an insight into the intelligence of those mighty animals that has placed them higher in my estimation than any other animal I have ever seen.

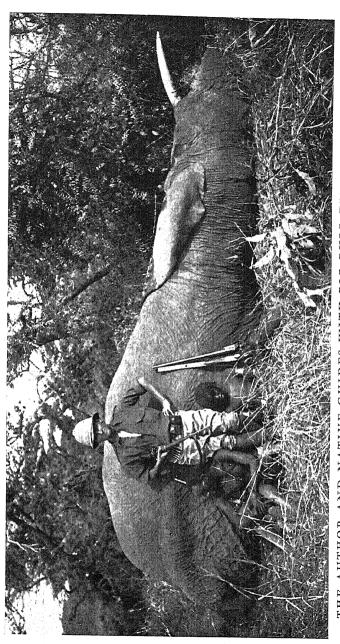
When the big bull hesitated, the six or seven others went hurrying rapidly away. But the moment he fell the others stopped. They were excited and worried, but they knew that one of their number was injured, and they immediately turned and crowded about him. I was amazed to see

that circle of elephants lined about the animal that was lying almost helpless in the grass, and then, to my surprise, I saw them lowering their heads, endeavoring to lift the wounded one to his feet. They struggled for two or three minutes, trying, I believe, to get their tusks under him, so that they might help him up, but the task was too much for them, and presently they gave it up and left him.

I never heard of another animal that would do such a thing, and I was very much impressed by it. I told Carl Akeley about it when I saw him next, and later he saw a similar thing occur. Later still, another hunter told him of a case in which two elephants had actually aided a wounded bull to escape by supporting him with their trunks and tusks.

So impressed was Akeley with these stories and with what he himself had seen that he came home and modeled the beautiful elephant group called "The Wounded Comrade", which probably did more than any other one of his sculptured animals to give him his enviable reputation as a sculptor. But there was I in the acacia tree, wondering

But there was I in the acacia tree, wondering what to do next. The herd had disappeared, leaving the wounded elephant down in the grass, and I could hear him moving and grunting as he endeavored to get to his feet. It was up to me to climb down from my prickly perch and make my way through the grass to where I could give him the final shot.



THE AUTHOR AND NATIVE GUIDES WITH BIG BULL ELEPHANT SHOT FROM A DETACHED GROUP OF THE HERD THAT TREED THE AUTHOR

Both Barker and I hurried toward him, and with another shot ended his struggles. He was a magnificent beast that measured eleven feet two inches at the shoulder. His tusks were almost perfect, too, and though they were far from a record, they were beautifully matched. We looked him over carefully, and then I began to wonder what had happened to the others of the little herd, so I ran up on the huge prostrate body in order to see over the grass.

At first I was a bit dismayed at what I thought I saw. Looking toward Lake Victoria Nyanza, the blue surface of which shimmered in the distance, I saw what appeared to be a grass fire. A huge cloud of smoke was drifting off toward the north, and even without my glasses I could make out what I thought were flashes of fire in the grass. Then an eddy of wind brought the sound of it to my ears, and I realized my mistake. There was no grass fire. There was no smoke—no flashes of fire. What I could see was a vast herd of stampeding elephants. The smoke was the dust that they raised as they ran. The flashes of fire were the reflections of the sunlight on their tusks.

For a moment my heart fell. What to do in the face of such a herd as that if they came our way I could not tell, but one thing was certain. The fewer there were of us, the better were our chances of success. I ran down from the dead elephant and began giving orders. Already our guides and gun bearers had come up, and I did n't want them

around. I swung my light rifle over my shoulder by its sling, and seized my elephant gun. In my very best Kisii I ordered the natives to get out of there, and I suggested that inasmuch as Barker did not have the interest in elephants that I had, he had better go too. I have been glad ever since that he did, for what followed might have been tragic indeed, if another figure had been about.

tragic indeed, if another figure had been about.

I ran back up on the dead elephant in order to see what had happened to the herd, and found that after all they were not coming directly toward us, but were headed to one side. As yet, Barker and the natives had not gone, and seeing that the herd would pass us with plenty of room to spare, I sent a native after them in order to find out where they were going. Then the herd passed from view as they went behind some trees that blocked our vision to the north. The native was gone, I suspect, hardly more than a few minutes, and came back breathless. He pointed and gesticulated, and I could make nothing in particular of his words, but it was evident from his actions that the herd had turned and was coming our way. I ordered the natives out of there on the run, and Barker followed them, while I scurried for another acacia tree. That time the thorns did not seem to bother me in the least. I made my way among them with the greatest ease, and ultimately found myself clinging to a branch well above the high grass, looking directly out upon that gigantic, stampeding herd.

It was a marvelous sight to see. The earth seemed to tremble beneath the impact of their feet. The huge dust cloud followed along ominously behind, and I was more than a little relieved to see that the tree I had chosen was not in the line of their advance. Past me they swept, at a distance of fifty or sixty yards, the whole herd packed tightly together into a column fully ten yards wide and a hundred and fifty long. So fascinated was I that before I realized it, the column had passed. Then I realized that I had better do something if I did not want to lose them completely. As the last of the elephants were still in view, I got down from my tree and started to follow them on their right flank. This was dangerous, I knew, but I hurried along beside them. winding in and out along those canyon trails where any moment I might bump squarely into some straggler. I realized that it was hopeless for me to attempt to catch up with them, so, in order to learn where they were headed, I looked about for another good-sized tree in which I would be safe in case they decided to come my way.

But I had two guns with me, and could not for the life of me climb the tree and keep both my weapons, so I decided to keep the light rifle because it had a sling by which it hung across my back. I leaned the loaded elephant gun against the tree trunk, stepped on the trigger guard and then on the muzzle, and finally managed to swing myself up among the thorns. I climbed as high as I could, and finally found myself clinging to a thorny branch well above the highest grass.

From my perch I could see the milling herd about three hundred yards away. They had stopped and bunched and seemed much disturbed. I began to try to count the number of animals in the seething mass, but that was impossible. So I counted a bunch of ten—then twenty—and with their bulk in my mind, I estimated a bunch that might contain fifty. Then I plotted the whole herd in an attempt to estimate the total. At first I did not succeed very well, but during the course of that strenuous afternoon I ultimately reached the conclusion that there were about two hundred in the herd. As a matter of fact I underestimated, for later a game commissioner said that he knew the herd and had several times counted about two hundred and fifty.

Now two hundred and fifty stampeding elephants make a sight that is never to be forgotten. I would n't have missed it for anything, especially when they were going in directions that did not seem to be bringing them toward my tree.

While I was watching them I saw a fine-looking bull raise his head in the middle of the herd, and let go at him. At that they stampeded again, and from a distance Barker fired. I thought he had gone, but he was hanging around the edge of things. With my glasses I could see that it was the leader he had hit — an old cow that had

headed out to one side, leading off with the rest swinging to follow. Evidently she had started in Barker's direction and he shot for her brain but missed, for I could see the blood running down her cheek.

I was mighty glad that I had chosen so sturdy a perch, and was glad, too, that I had climbed so high. I did not feel particularly worried at the moment, but the thorns must have been tugging at my clothes, and later I found innumerable scratches on my person. Certainly I was more excited than I thought, for I do not recall thinking of the thorns at the moment. All I could think of was that vast herd of elephants, and ultimately I quit squirming and decided to sit tight. I even decided that I would not fire again unless an elephant actually touched my tree, and with that purpose in mind I raised my gun, twisted my legs about my branch and grew pretty steady. When they came close, no numbers could possibly suggest the numbers as they appeared to me. It was almost fantastic, and wherever they went through the tall grass they kept bunched tightly together, leaving a wide, smooth road-way along which the grass was absolutely flattened. It was as if a steam road roller had been that way.

But as I was looking through my glasses, I suddenly caught my breath and my heart seemed to beat almost in my throat. The animals in the lead hesitated for a moment, throwing their

trunks up to "feel" for the wind. Then they deliberately swung and bore down straight for my tree. Surely they must have caught my scent, I thought, and now were determined to blot out once and for all the enemy that they knew was in the vicinity. Down they came, straight for me, compact and deliberate.

They seemed to have started for my tree, but as my heart climbed into my throat and I wondered what I should do, I saw that they would miss me by a good thirty yards, so I "froze" where I was. I had long since learned that protective coloring is not nearly so good a camouflage as is immobility, and frightened though I was, I was immobile. I hardly dared to breathe, and there I clung, thanking my lucky stars that they would miss me. They went past, and as they went I permitted my head to turn, in order that I might follow the end of the herd. I breathed a sigh of relief at last, when all of them had definitely gotten past, and then I turned my head farther and nearly fainted with surprise and fright, for there, not fifty yards away, was the head of that column, coming slowly—and this time directly—for my tree.

They had swung about when they had passed—had, perhaps, gotten my wind more clearly—and now I could see them coming for me slowly. They were coming eight or ten abreast, and each of the leading animals had its trunk down close to the ground, twisting the end about and feeling for my wind. Behind them came the others —

scores of them — and up over the backs of the leading group I could see the twisting, snakelike trunks as those behind tried as well to catch my wind. Scores of trunks were raised above the scores and scores of broad and slowly swaying backs, and always at the head of the column were the old females with their trunks down near the ground, coming toward me slowly and determinedly — not panicky now — but silently. There was very little noise. Now and then some member of the herd back in the middle would trumpet or squeal, and always those behind were pushing forward on those that led. But the leaders were not to be hurried, and on they came, their steps short, their ears wide, their trunks writhing about near the ground, trying always to keep my scent.

I dared not move, even to raise my gun, for should that herd come directly against my tree it would go over like a match stick. All I could do was cling to my perch and hope. My elephant gun was at the base of the tree, and I swore under my breath for having been so foolish as to leave it there. It would give the elephants my scent, and undoubtedly one of them would seize it and break it. Still, I had my other rifle, which would do good work at close range. But I knew that the whole affair was dependent on luck. I had seventeen cartridges and there seemed to be that many score elephants.

Closer and closer they came — thirty yards —

twenty — ten. And then for some reason — I shall never know why — the leaders stopped. For half a minute there was a lot of pushing from behind and the leaders had to push back strenuously in order to hold their own. But they refused to move forward another step. I stared in surprise and I could not understand it, but there they stopped. Then, with the utmost deliberation, the leaders swung aside — whether because they had lost my scent due to my being so high in the tree I do not know — and though they came within eight paces of my tree (I stepped it off afterwards) they made not the slightest attempt to molest me.

By this time the grass all about was mashed down flat, and I could see many details that would have been hidden an hour earlier, but I contented myself with looking. I did not move otherwise. The huge herd went shuffling along silently, save for the occasional trumpetings, and then my blood ran cold again, for when about half their numbers had filed past as a company of soldiers in column of squads might have filed past, one big fellow deliberately left the column just before he came opposite my tree, and turned toward me. With his trunk upraised he came, and having thrust the tip of his trunk into the very branches — having reached with it to within six or eight feet of where I clung — he twisted it about suggestively and then rejoined the column. I was glad to see him go, but hardly had he gone than another

followed suit. He went through exactly the same procedure — approached — almost touched the branches — wiggled his trunk — and went back to the column, while I, still motionless, still breathless, grew limp and weak as I finally saw them pass over the summit of a little hillock and disappear down its farther side. It had seemed to me that it had taken that herd hours to pass, though already I had estimated that their column was about a hundred and fifty yards in length, and never have I been more relieved than when I heard their trumpetings and squealings dying away in the distance. For one day, certainly, I had had enough of elephants.

My nerves were sadly frayed as a result of that experience. Even when I had found Barker again and we had gotten back to camp, I felt weak, and several times that night, when our picketed mules stamped or moved about, I was startled into frightened wakefulness with the impression that that herd of elephants was charging down upon me.

The nervous strain of facing charging animals is greater than most people seem inclined to think. That there are occasional hunters who are absolutely without nerves is, I suppose, true, but I find that I am decidedly nervous and shaky when I approach close to big game and do not know what they are going to do. But when they charge, I find that my nervousness tends to disappear. My gun is steady, and until they are

down or have bolted I can count upon myself. But then again, with a rhino or an elephant lying dead only a little distance off, I have more than once grown decidedly weak in the knees, and I have felt all my muscles actually quake until I was forced to sit down and recover myself.

Every hunter, no doubt, has feelings that are the result of his own particular make-up, but I more than suspect that my reactions are not unusual — that many of the hunters who have gone after rhinos and lions and elephants have had that same strange reaction when the beast has fallen before their steady fire or has abruptly bolted away. As for me, I have often returned to camp rather than continue my hunting after my nerves have been strained by some particularly strenuous experience.

It must be remembered, however, that every one of the animals in Africa that put such a strain on a white man's nerves when he is hunting them, are killed occasionally by the natives. Furthermore, they have been doing just that since time immemorial. Where the white man saves up his money until he can purchase guns and ammunition and equipment enough to burden down a hundred natives before he starts off to get his trophies, the native smelts himself some iron ore, hammers out a spear with a blade three feet long, kills an ox and makes a shield of its hide, and then, with no more equipment than that, walks out in search of the lions that kill his cattle.

Neither can he slay the beast at a hundred yards — or even at twenty. Instead, he must manage somehow to come to close quarters, which often means that he must manage to get the animal to charge. Then, with only his leathern shield for defense, he boldly holds his ground and slays the animal with a well-placed thrust of his effective spear.

That this is not uncommon is proved only too easily by the number of lion-skin headdresses one sees among such people as the Nandi tribesmen, where no warrior may wear such a decoration who has not slain his lion.

Nor do the natives stop at lions. In some sections of the country they have dug elephant pits by the score, and one must be very careful if he would avoid them.

On one occasion, when Dugmore and I were working on the eastern slopes of Mount Kenia, that beautiful landmark that rises to about seventeen thousand feet and rears its sharp snow-clad peak almost exactly on the equator, I was leading the safari along a trail. It was elephant country, but we had seen none of the beasts, and we would gladly have welcomed a few so that we might have photographed them. But there in the heavy growth photographs would have been impossible because of the lack of light, and all we could do was to follow the trail which wound in and out and up and down endlessly.

There was plenty of light to make out that the

trail was wide and clear, and even to see every twig_and pebble, and I had just glanced ahead and seen that for twenty yards or so the trail was straight and apparently firm. Then, without the slightest warning I felt myself falling. I never have had such a strange sensation before or since. Where the moment before I had been walking along a perfectly straight, firm trail, now I was pitching down through space — through utterly black space. And then I lit abruptly. I tried to look about me, but I could not see a thing. I felt myself and determined that there were no bones broken, and then I became aware of a nauseating odor that almost sickened me. I glanced about again, and then looked up. There, seemingly a long distance above me, I saw a tiny hole, and as I watched it, I saw the face of my gun bearer framed in it. Then I saw that it was not so far away as I had supposed. It was only that the hole was small.

A shouted conversation followed, and I was hauled out — none the worse. I had fallen into one of the cleverly concealed elephant pits that the natives of that district are so adept at making, and by great good fortune I had not fallen on one of the pointed stakes that were set in the bottom of the pit.

These pits are dug along the elephant trails, and are covered with small sticks, over which leaves and grass are spread, until they are completely obscured. Even when I had been dragged

out and knew what was there, I could not make out the limits of the hole, and where I had fallen in; the twigs had sprung back about the hole I had made, partly closing it, which accounted for the smallness of the opening.

These pits are numerous, and where a herd might readily miss one, the natives dig several, so that once the elephants become nervous over the danger that they sometimes suspect, they are the more likely to fall into the holes that have been dug for them. Once the heavy animals have plunged down, they find themselves in such a position that they can rarely get out. The particular hole into which I fell had evidently caught some animal or other not so very long before, and no doubt the stakes were covered with decomposed flesh, from which arose the odor I had noticed. Wounds from such terrible weapons would certainly have brought blood poison, even if they had not proved immediately fatal, and it is doubly fortunate for me that I missed them.

On another occasion I was riding a mule at a trot along a trail, when suddenly the animal stopped stock-still. I could not make out what he had seen until I happened to look down and found that he was standing on a ridge about a foot wide between two narrow pits. There was a row of them — a dozen or more — about ten feet long and about eighteen inches wide at the top — and all of them lying parallel at a distance of about a foot from the adjoining ones.

These pits were not covered, but the grass that grew from the narrow ridges separating them had spread until it completely obscured all sign of the pits, which were eight or nine feet deep and were wedge-shaped. How the mule happened to miss them I cannot guess, and it is certain that such a trap would be very effective for elephants.

The animals for which these pits are dug are probably the most extraordinary creatures in Africa. It must be remembered, of course, that these magnificent beasts are not the same as those that one sees so often in circus parades and zoos. So far as I know, only two or three African elephants have ever been successfully presented to the public by either circuses or zoos. Jumbo was the most famous of these, and it is interesting to note that while Jumbo far surpassed the average Indian elephant in size, he was anything but exceptional by comparison with other African specimens.

The African animal is a nobler beast than is his Indian cousin. He is larger and his tusks are larger. His head is very different in shape, his ears are bigger, and there are other minor differences.

Most animals seem to have a very definite habitat in which they thrive, but this is not true of the elephant. He is perfectly at home in the lowland thorn-bush plains of tropical Africa, and thrives high on the sides of Mount Kenia and

Mount Elgon. Generally he feeds on the tiny leaves of the thorn trees, but what delight him most are the young shoots of the bamboo and banana trees, and sometimes he goes merrily on his way thriving on the naturally cured hay that is common in Africa during the dry season. His appetite is enormous and herds will sometimes tramp down great areas in their search for food.

So far as I know, the elephant has not a single enemy except man. There is no disease of which I have ever heard that preys upon them. No one has ever found an elephant dead that has died a natural death. That seems strange, when they are about in hundreds — even thousands — and their huge bulks cannot be easily hidden. Some say that they have a certain remote and isolated spot to which they go to die. Hunters have vainly searched for these treasure stores of ivory but one has yet to be found, and I suspect strongly that this tale is but a myth. Akeley, however, did find, quite accidentally, a secluded place which was an elephant's maternity bed - where plenty of signs showed where the cow had gone off by herself and made a "nest" by clearing a small and protected bit of ground. There she spent her expectant few days, until her calf finally came, only to be taken back to the herd as soon as it could travel - which was not long.

Despite their size, elephants seem amazingly well adapted to the life they lead. They are remarkably quick, and though they cannot run as

fast as a horse can trot over smooth ground, they can outdistance any horse if the going is rough. They are almost unbelievably strong. Four days after I spent that nervous hour in the tree while the herd charged and countercharged about me, I saw a tree nearly twenty inches in diameter that had been broken off near the ground and was lying torn and twisted, where the elephants had pushed it over and fed upon its leaves.

Their trunks are unlike almost anything else in nature. They are made up of innumerable tendons and minute muscles, crossing and recrossing in every direction, until one needs a sharp knife to make much of an impression. With that instrument they feed and water themselves. They can tear down branches as thick through as a man's thigh, and can wave them about as a lady waves a fan. On the other hand they can pick up single leaves or tiny nuts and adeptly tuck them into their mouths. When they are in the water holes they occasionally shoot streams of water from their trunks that remind one of nothing less than a fire hose, and occasionally they use that powerful appendage to toss some unfortunate hunter.

One of the men who, unknown to me, hap-

One of the men who, unknown to me, happened to be hunting the big herd from the other side at the same time I was in their midst, was a professional hunter named Outram. I met him the next day, while he and two Russian noblemen he was guiding were trying to find an elephant bull they had shot, and at that time he told how

a wounded bull had tossed him. He and a companion had shot an elephant and the beast had fallen, when Outram approached, thinking the animal dead. But it suddenly lurched to its feet, seized Outram with its trunk and tossed him. Luckily no bones were broken when he fell, and though the elephant followed at once, Outram scurried away while the elephant stopped to trample the pith helmet that the hunter had lost. Now, in the thick bush, Outram got right behind the animal and did his utmost to maintain that position while the elephant turned this way and that in an effort to catch him. Finally the shaken hunter could keep up the uneven contest no longer and jumped aside into the bushes, when, fortunately, his companion was able to fire the bullet that brought the enraged animal down.

More often than not, however, a charging elephant curls his trunk up out of harm's way. That useful instrument is much too important to be risked, for obviously an elephant could not live if, by any chance, the end of its trunk were to be lost. So the hunter has need to be careful when he sees an elephant approaching with his trunk curled up. There is no doubt then that a charge is under way.

The elephant, too, has very sharp ears and a wonderfully acute sense of smell. Raised high in the air, or twisting about close to the ground, the trunk is able to catch any stray breath of wind carrying a warning scent.

Contrary to popular belief, the elephant is not a flat-footed animal. Actually he stands on tiptoe, and from the toe nails the bones of his foot slant abruptly upward. There is no bone that comes near the sole of his foot at the back, but all of that portion of his foot is very much like a huge rubber heel. That is one reason why he can move so quietly, and it is the reason why he can make his way through swampy ground without trouble. As his weight is put upon a foot, the foot enlarges, giving him a greater area on which to stand. As his weight is removed, the foot contracts. The result is that when he steps into a muddy place, his foot enlarges, and when he lifts his foot it contracts and there is practically no suction, as there often is with other animals. His legs, too, are constructed so that it requires very little muscular effort for him to stand. One leg bone stands vertically on the one below it, and there is no place in an elephant's legs where muscles are under tension as they are, for instance, in the hind leg of a horse. The result is that the large elephants seldom lie down.

Taken all in all, the elephant is to me Africa's most interesting animal. And yet he is bound to disappear before the advance of civilization. Unlike his Indian cousin, he does not take very readily to captivity. He has rarely been tamed, but the Belgian Government is now carrying out some experiments in the hope of being able to turn him into a beast of burden. If they are

successful with this, the African elephant may be saved for a long time to come, but as it is there is little use for him in Africa except as he is a producer of ivory.

Settlers will not let him roam over their plantations, and natives will protest against his breaking down their huts and trampling their gardens. For a time, at least, he may find refuge in small sections of rugged and useless country, but when civilization encircles these or finds some use for them the elephant must finally go. He cannot confine himself to small areas in the wild state, so it seems obvious that the African elephant is doomed to extinction.

I hope that because of the time I have spent on his trail I have been able to make this majestic animal better known to the world at large, for even in our lifetimes vast changes have come and will come to their mighty herds. There are other animals, of course, that are facing extinction, but the elephant, it seems to me, is the most majestic and the most deserving of a better fate.

Certainly we have approached the beginning of the end of the Age of Mammals — that remarkable epoch in the history of our world during which evolution has carried on such extraordinary developments. But with the close of the Age of Mammals, evolution will largely cease. The brain of man, no doubt, will continue in its evolutionary course, but it seems not unlikely that already his body has passed its zenith and

TRAILS OF THE HUNTED

has begun to degenerate. A few members of the animal kingdom, of course, will live on with man. Birds, reptiles, and insects will continue and change slowly through evolution, no doubt, and life in the vast stretches of the sea will live its course largely uninfluenced by man, though even there, by eliminating certain creatures and by polluting the waters, man is warping the natural development of whole species for which he has but little use and concerning which his information is of the very slightest.

CHAPTER V

Some Observations in the Field

It is a general belief, due, probably, to innumerable fiction stories, that animals living together in herds or packs are invariably led by the biggest, strongest, wisest male among them. Every one who has read many animal stories certainly has come across this bit of "natural history", yet in twenty-five years of careful observation in the field I have never seen a herd, in which there were any females, that was led by a male.

It is true that I have often seen herds that seemed to have no leader at all, and I have also seen herds that were so muddled that I could get no idea of which one might be the leader, but in all my experience — whether in Africa or America or Asia — I have never seen a case in which a male was the leader of a herd that had any females in it. Occasionally one comes across a herd made up only of males. Obviously, in such a case, a male must be the leader if there is any leader at all, but even in such cases it is not the biggest and strongest and oldest male that assumes that position.

When females are present, however, and a leader is evident, my observation has invariably shown me that an old female plays the part. I am not in a position to say positively that such is invariably the case. Undoubtedly there are exceptions. It has been said, for instance, that among baboons the leaders are likely to be the males. However, I have seen baboons many times, and I reall no case in which that was evident, though that may have been due to the fact that they were so muddled and mixed that a leader — if there was one — was not apparent to me. With many animals, however, I am more familiar than I am with baboons, and I am certain that if the females do not invariably lead, at least they usually do.

The truth of the matter is that animals have many characteristics that are very similar to those of man. A herd of elephants, for instance, is an interesting group, in which many characteristics are almost laughably human. The old bull does not lead. He leaves that responsibility to one of the old cows, just as men are prone to let women run their households, and the female is very likely to be careful and wise in her actions. The big old male, meantime, follows along at the end of the herd, certain that the leader and the others have their eyes and ears open for signs of danger. The result is that he can feed in comfort, without being forever on the alert, and without being troubled by the domestic problems that arise. If there is some suggestion of danger he is apt to take it calmly, though the cows and the younger members may be thrown into quite a furor. Where they are all alert, with ears outstretched, with

eyes wide, and trunks "feeling" for the wind, he may cast an unhurried glance about, may pull down still another branch in order to get a dainty mouthful of its leaves, and may, unless the warning has been very pointed, pay very little attention to the fuss that has been raised. If, however, the warning is enough to attract even his attention, and to send the others scurrying off, he is not likely to remain unduly long. He has long since learned the foolishness of that.

Such a bull, too, is very likely to be easily upset by the playfulness of the children. I have seen elderly men who have acted very much the same way as elderly bull elephants sometimes do. They grunt and almost seem to frown with impatience at the antics of the youngsters, and if the antics continue, the old fellows are likely to show their dislike of such unnecessary youthful spirits by outbreaks of real temper.

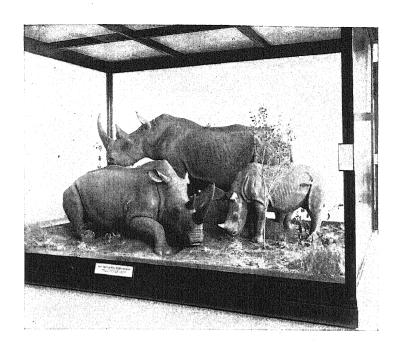
Of course, the very largest of bull elephants are not to be found in the herds. These are usually the oldest bulls, and despite their size, they are not so capable as are some of the younger ones. In time the big old fellows are driven out by the younger and stronger herd bulls, and from then on are likely to wander alone. Their dispositions are likely to be ingrown. They come to be self-centered as other bachelors are said to be, and so they wander up and down the land alone, unable to compete with the younger bulls, and growing more and more crabbed and disagreeable as time goes on

I saw that the velvet was hanging from his antlers in shreds, and I realized that he was battling the tree for the purpose of getting rid of the covering in which his antlers had been encased during the period of their growth.

It is, of course, widely known that some animals shed their "horns" annually and some do not. Elk, deer, moose, and caribou are those that periodically rid themselves of these huge weapons, and then Nature does an amazing thing. Having shed a pair of antlers that may, as with the moose, attain a spread of over six feet and a weight of fifty pounds, Nature shortly sets about growing the animal another pair. During the growth the antlers are covered with the "velvet", under which innumerable blood vessels carry on the amazing work of building up the huge antlers. Then, having built up these weapons once again, the velvet has served its purpose and the animal proceeds to get rid of it by just such a method as I found my young bull utilizing.

Apparently, at this period, the drying skin, which is covered with short hair from which the name "velvet" has come, causes an itching sensation with the result that the animals rub their antlers on young, yielding trees, scraping off the now useless velvet and polishing the antlers until they become the smooth, sharp weapons with which every one is familiar.

All of this I knew, of course, but I never before had seen any animal make such a fuss about the



WHITE RHINO GROUP

Collected by Colonel Roosevelt and Designed and Mounted by the Author. Now in the National Museum, Washington

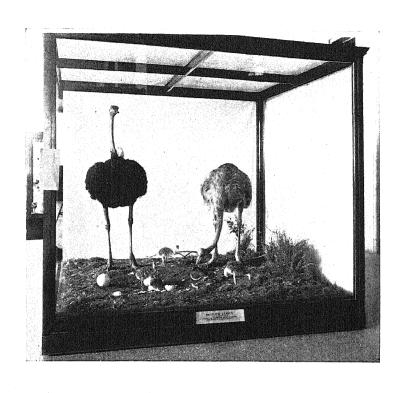
job. Usually they rub their antlers at every opportunity, until the task is completed, but this young fellow was evidently getting rid of the velvet and getting in training for some fight or other at the same time. But whatever his purpose, he certainly was busy with it, with the result that I was able to approach more readily than would otherwise have been possible. Carefully I crept on, watching his every move. A step at a time I advanced, pausing, "freezing", and moving on, all the time approaching closer and closer to the unsuspecting animal.

He was about three or four years old, and his five point antlers had the strips of velvet hanging from them in the most tattered and disorderly manner. From time to time he would charge the little tree, shake his head furiously, and leave bits of velvet on the branches. And through all this time I was creeping closer. Fifteen feet — ten feet — eight feet. A little more and I could almost have reached out and touched him, and then I decided that I might be playing with fire. An elk is not to be considered a dangerous animal, and yet, should I reach out and put my hand on him, he might happen to swing about too quickly to permit me to leap away. Should he do that, his sharp antlers might readily play havoc with me, and certainly I did n't want to be "mauled" by a young elk after I had successfully eluded rhinos and lions and elephants in Africa. So I stayed where I was, wondering how long it would take him to learn that I was there.

Then, perhaps, some eddy of the air carried my scent to him, and he turned in a flash. He certainly was a surprised young elk, for he paused and stared at me, and not until I waved my hands at him did he move to escape. Then he was off in a series of great bounds, which carried him out of sight among the trees at once.

To me such experiences are a delight, and traveling in Yellowstone Park with McBride, I seized every opportunity to stalk the animals. I made a notebook full of sketches. I made notes and took photographs, and finally, after having examined hundreds of elk, I regretfully pointed out the ones I wanted, and McBride brought them down.

Before we had been in the park long, a heavy snowfall covered everything, and I determined to show the mounted group amid just such surroundings. With a collection made up of stumps of trees, branches, bits of moss, and rocks safely packed and sent back to my studio in New York, and filled with energy after that interesting outing, I set to work as soon as I reached home. It was great fun to take those elk and mount them in order to make them stand again among just such surroundings as those in which I had studied them. I erected two good-sized pine trees, and upon their branches I built huge mushroomlike coverings of artificial snow. I covered the ground with it, and placed my three elks in attitudes that seemed most typical of them. The bull was



THE ROOSEVELT OSTRICH GROUP

In the National Museum, Mounted by the Author

a handsome specimen, with wide-branching antlers, and the cow and the calf were excellent examples of their kind. But I was faced with a very serious problem.

I was mounting these animals in New York, and they had to be delivered in San Francisco and then returned to Washington. The result was that I had to design the whole group so that it could be "knocked down" and set up again, once it had been delivered three thousand miles away. It was not an easy task. The bull's horns had to be removable. The snow-laden branches had to be made separate from the tree. The snow-covered ground had to be shipped in sections, and yet they all went through in perfect shape. They were all assembled in San Francisco by my early associate and advisor in taxidermy, John Rowley, who followed my written instructions to the letter, and when the Exposition had finished with them, they were taken apart once more, were sent to the National Museum in Washington and again were assembled and placed on exhibition.

I have done better groups than that one. I have had other tasks as difficult, but that one always pleased me, for still, after two trips across the continent, it is in excellent shape, and certainly the average museum group could never stand that amount of handling and still remain presentable.

One is forever being given weird problems in such work as that in which I am engaged. On one

occasion an actress called on me at my studio and told me that her favorite horse had died. She wanted me to mount the animal, and I took the order. But she was insistent that I mount it in such a manner as to make it possible for her to get on its back.

That stumped me, for a time, for Akeley's method, though sturdy, would not then permit such familiarities. It should be explained, perhaps, just what Akeley's epoch-making development was.

Formerly, in the "medieval" period of taxidermy, one mounted animals by placing the skin over a framework or skeleton support, turning the whole thing upside down and stuffing it full of hay or excelsior. Fortunately for me, that method had passed out long before the time I joined the ranks of the taxidermists, but it was followed by another method which, though much better, was far from perfect. This second method was to model the animal in plaster of Paris, and then to stretch the skin over that dummy. The result, however, was usually far from satisfactory, due to the practical inability of the taxidermist to make free changes when he made mistakes.

Akeley saw this failing, and so began modeling his animals in clay. Now a clay model lends itself to all the corrections one cares to make, but of course the skin cannot be stretched over such a form. It would not be at all permanent. So Akeley, pondering this problem, determined to

model in clay, to cover the clay with plaster of Paris, making a mold in two sections, each of which, when removed from the clay model, was to be lined with papier-mâché and wire netting, thus making a shell about one eighth of an inch thick. These shells then were to be removed from the two molds and placed together, duplicating the clay model exactly, but in light, permanent form. Over this form the tanned skin was to be applied and the mounting completed.

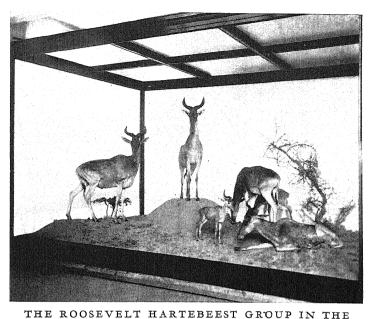
This method was a wonderful improvement over the old ones, and was the method that Akeley had generously turned over to me after having kept it a secret for several years.

I planned to mount the actress' horse by this method, but the light metal strengtheners within the figure would never permit the lady to mount her horse, or at least the animal would rapidly become terribly swaybacked if she should venture it. So I was faced with finding some method of correcting this difficulty. After some thought I determined to strengthen the model with halfinch wooden ribs within the papier-mâché form, and my experiment turned out to be a complete success. This, in itself, would not have been an important matter, but that system was instantly adopted by Akeley, for he saw the advantage of the stronger form. So far as I know that is the only improvement that has been made in the Akeley method of mounting animals since first he presented it to the public.

During the year that followed my return from my first African expedition, I was constantly in touch with the American Museum of Natural History. From time to time I was given contracts for mounting specimens, and Carl Akeley was a frequent visitor at my studio. Having been asked by the Field Museum in Chicago to mount a group of African buffaloes for them, Akeley came to me and asked if he could do the work in my studio. I gladly gave him permission, and it was during this period that he began the experiments that resulted in the invention of the Akeley motion-picture camera — perhaps the most revolutionary development in the field of cinema cameras.

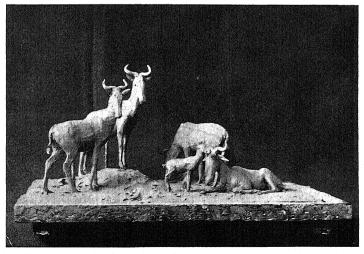
Prior to the appearance of this invention, motion-picture cameras were heavy, awkward machines, hard to move, difficult to handle, and subject to innumerable accidents. They were made largely of wood, and for the naturalist they were very, very awkward and hard to get into action. Because Akeley had been unable to get some motion pictures of African game with the motion-picture camera that he had taken with him, he determined to develop something new. It was my privilege to talk with him almost every day during the period of the development of this instrument, and naturally I became acquainted with every detail of its construction.

It was interesting to watch him work. He never made any detailed drawings. He would make a



THE ROOSEVELT HARTEBEEST GROUP IN THE
NATIONAL MUSEUM, WASHINGTON

Shot by Colonel Roosevelt and Designed and Mounted by the Author



SKETCH MODEL FOR THE ROOSEVELT HARTEBEEST GROUP

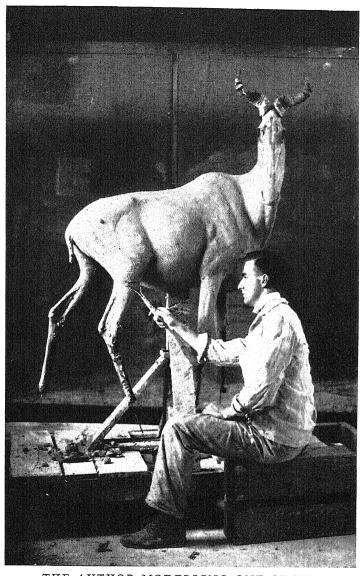
rough sketch of some piece or other and would have that made. With that in hand, he would make other sketches of other pieces, and gradually, with many changes, the camera was constructed. It was coming to completion about the time America entered the World War, and almost at once the Government ordered all of these machines that could be built, for there was no other camera so well fitted for war work. It was built entirely of metal; it was light; it could be trained in any direction with one hand and with great speed, and it was far sturdier than anything else that was in existence at the time.

The result was that Akeley Camera, Incorporated, was organized, and because Akeley became an advisor to the Engineers Corps of the Army, he came to me and insisted that I take over the task of filling the government contracts. I hesitated at first, for I was already taking lessons in the handling of airplanes and had decided to enter the Air Service as a pilot if they would take me. Being over the age set for this work, however, I was turned down and I finally permitted myself to take the position that Akeley had asked me to consider. The result was that I, with years of experience as a hunter, found myself shelved in a hectic New York factory during the whole period of the war, making cameras, when every red-blooded acquaintance I had was in the service. Many times I have been told how

vastly important those Akeley cameras were, and I have even tried to salve my own feelings with similar arguments. But still I feel as I did in 1917 and 1918. I shall always wish that I had been in uniform.

Just prior to the time I became a manufacturer of cameras, I was given the task of repairing a mounted rhino head. It was cracked and in bad shape, and I did not see just how I could do a good job, until it finally dawned on me that I could cover that whole head with plaster of Paris, and with that holding the pieces of skin in shape, I could remove the material within the head. Having done that, I found it simple to replace the material I had removed with a fine, clean papier-mâché form similar to those Akeley had developed.

In this, however, there was a difference. Formerly, these papier-mâché models — or manikins, as we have come to call them — were made inside a plaster form that had been made over a clay figure. This time the skin of the animal had been directly covered with plaster of Paris. Of course, a hairy skin could not be so covered, for the hairs would become set in the plaster. But with a rhino head, on which there is no hair, the method was practical. And my successful experiment was valuable only as it turned out to be a step in Akeley's development of a similar method of mounting elephants. Seeing the success of my



THE AUTHOR MODELLING ONE OF THE ROOSEVELT HARTEBEEST FOR THE NATIONAL MUSEUM, WASHINGTON

repair job, Akeley, who was about to mount his elephant group for the Museum of Natural History, stretched the skins directly over the clay figures, covered the skins with plaster, cut them in two, dug out the clay, and replaced it with papier-mâché manikins strengthened with wooden ribs. With this done, the plaster was removed, and the halves were once more joined. That, with all hairless skins, is now the standard method of taxidermy.

Following the war I continued my dual job of camera manufacturer and taxidermist until 1922, when President Osborn of the American Museum asked me to take charge of its Department of Preparation. I had done much work for the Museum in my own studio, and it pleased me greatly that I should be chosen to take charge of what was to be and has since become the most advanced department of taxidermy in any institution in the world. Furthermore, there is a great deal more to the work than mere taxidermy, difficult though that is in itself. I was to be responsible for the construction of all the amazingly complicated groups that are now being adopted so widely.

This was just such a position as I knew would greatly appeal to me, but for five years I had been working furiously, without a single vacation, and furthermore, I had promised my wife — I had married not very long before — that I would take

TRAILS OF THE HUNTED

her to Africa on a trip. The result was that I told the Museum that I would be glad to accept the offer if I could first take a trip to Africa, and they considerately consented. With my wife and two friends, therefore, I made ready, and in 1922 returned for my second visit to the land which, above all others, contains that which delights the soul of the lover of the wilds.

CHAPTER VII

THE CRATER OF NGORONGORO

In 1909 I hunted along the border of British East Africa within sight of the German colony that is now called Tanganyika Territory, yet not a whisper came to my ears of the Highlands of the Great Craters. I even asked my men what lay to the south beyond the border and was invariably told, no matter how often I asked, that nothing lay there save a God-forsaken land - low, hot, and devoid of life — filled with nothing except thorn bush and fever. So, being content in a wonderful game country, I pressed my investigations no further, and did not learn until years later that I had almost been able to see, from the Southern Game Reserve, the outlines of a district that is, without doubt, the most remarkable in all the world for the number and diversity and interest of its animal inhabitants — a district that had been visited by only a handful of observers before my wife and I made our way to it in 1923 - a district that had, so far as I know, never been visited by Americans prior to that time.

For years safaris have been leaving Nairobi and traveling in many directions, making their way into occasional sections that have rarely been visited, but usually traveling back and forth across districts that long since have been considerably shot up. Sportsmen have been shooting and reshooting over the same ground. They have been trekking far north in search of newer and less disturbed fields. Yet this magnificent spot, thank goodness, has remained untouched — safe, for the time at least, from the onslaughts of the sportsmen.

Why information concerning it had never come to the ears of the professional hunters and guides of British East Africa I do not know, for as early as 1894 there appeared a publication in Germany by Doctor Oscar Baumann, in which reference is made to it, and in 1906–1907 it had been thoroughly explored by Doctor Fritz Jaeger, who gave it its name — Das Hochland der Reisenkrater, or The Highlands of the Great Craters. Furthermore, there is no natural barrier to the region. The great Athi Plains roll south through the Southern Game Reserve, over the border, and almost to the foot of the greatest of the craters. To the east lies that greatest of African mountains, Kilimanjaro, with its smaller but more rugged companion, Mount Meru, not far away, and yet the Great Craters had rarely been visited by English-speaking ex-plorers until Sir Charles Ross, in the winter of 1921-1922, in the company of A. Radclyffe Dugmore and T. Alexander Barnes, visited the place. They brought out a fascinating lot of information concerning this greatest of all the world's extinct craters, wherein live such tremendous herds of

game and such widely diversified species as to make the spot a marvelous and unique animal Arcadia.

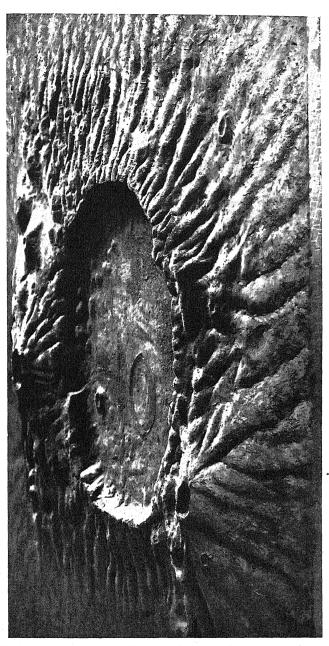
It was from Sir Charles that I obtained information of this extraordinary district, and he was so kind as to give me a set of maps as well, with the result that my wife and I were members of the first American party that ever visited that region.

The branch line railroad set us down at the little town of Moshi, which nestles on the southeast slope of Kilimanjaro, and from there we made our way to the west. We passed through the post of Arusha on the slopes of Mount Meru and with a well outfitted safari made our way farther into the interior, across the Great Rift Valley, with its tsetse fly belt which we had to cross at night in order to guard against the bites of those germcarrying pests. We were even forced to climb at night up the two thousand foot escarpment on the farther side of the valley, following native trails and trusting to our wiry little mules to make no false steps; but once morning had come we found that the trip was worth the energy it required, for behind us lay a vast and rolling land such as one rarely has an opportunity to see. We viewed it as one views the land from an airplane, and furthermore, with our added elevation had come such a delightful climate that the difficulties of the trail were almost instantly forgotten.

Where we had made our way across a hot and waterless country, with wide sections parched dry

in the glaring sun, we were now traveling through a rich green land where every view was a delight, and Nature seemed to have been more lavish than she is accustomed to being even in that fortunate continent. We had entered the land of the Wabulu — the People of the Mist — and saw their well-fed herds of sheep and goats and cattle all about each village that we passed. The heated plains below were forgotten, and we made our way across that elevated plateau — the altitude is about five thousand feet — with more vigor than we had ever thought to have again while we had been journeying through the heat. Now we turned and traveled to the northward for several days, and finally approached the land for which we were searching — the vast and unparalleled Ngorongoro — the greatest of the craters in that land of extinct and time-eroded volcanoes.

Up and up we climbed, gradually approaching the foot of the more abrupt slope leading to the vast crater's very edge. In those highland sections the endless stretches of grass gave way to bush, which grew so thick that our safari seemed lost among the vegetation. The trail wound in and out, until only two or three of the men ahead and two or three of those behind were visible at once. We kept our rifles constantly ready, for so heavy was the growth that we might have come upon elephants or rhinos without warning. That such animals were about, we knew, for now and again we came across signs of them, but still we pushed



THE AUTHOR'S MODEL OF THE GREAT CRATER OF NGORONGORO The Home of Tens of Thousands of Mixed African Game

on, anxious to get our glimpse into that huge crater of which we had been told such extraordinary stories. All one morning we struggled up along that trail, resting often, for the elevation was growing constantly, and the altitude was beginning to make itself felt. Now and then we passed through an open glade, only to plunge once more into the dense bush, and it was with great relief that we discovered a level spot at noon and halted for our midday rest. There was a narrow opening in the trees just beyond our stopping place, and I made my way through it and into the undergrowth beyond. Pushing through the bushes for a little way I suddenly found myself standing on the very brink of nothing. For a moment I merely gasped, astonished that I could have reached the abrupt edge of such immense space without realizing, until I reached it, that a single additional step would have plunged me down the precipitous side of that vast crater. I gripped the bushes tensely and gazed out across such a view as I had never seen before.

Imagine yourself standing on the edge of a gigantic bowl twelve miles in diameter, with huge sweeping walls rising to a wonderfully uniform height two thousand feet above the level of the bottom. Imagine stepping suddenly to such a place, and holding tensely to the slender branches of the bushes while you gazed down upon lakes and forests and plains that were so merged into uniformity by the distance as to seem like nothing more than a gigantic and amazingly smooth floor covered with a patchwork of different shades of green and tan, with here and there the sheen of sunlight on smooth water. The very edge of the world seemed to be that awe-inspiring precipice upon which I was standing, for nothing whatever was visible save the bowl itself and the sky. What I later learned were two forests of acacia trees lay so far below me as to appear like smooth sections of well-kept lawn. Reed-filled swamps, about the edges of which we hunted lions once we had made our way into that amazing place, gave us no inkling of what they were. I clung there, gazing for minutes, making out this and that, and conscious of vast numbers of tiny black and white specks that looked very much as pepper and salt might look scattered about the bottom of a bowl of dark green jade. At first I could not understand what the specks were, and then, drawing back from the edge, I focused my glasses.

To my amazement the specks came to life and resolved themselves into enormous herds of zebras and wildebeests. The brightly marked zebras were the tiny grains of salt. The dark wildebeests were the flakes of pepper, and even when my glasses had shown me positively what they were, I could hardly believe my eyes, so vast were their numbers.

We descended into the crater by a precarious trail, and for three weeks we camped there, collecting a few specimens, but principally engaged

in studying the animals of that most perfect of all animal Edens. We found that within the one hundred and ten square miles that make up the floor of that huge crater there is everything that an animal could possibly desire. There are streams of sparkling water, and lakes like perfect mirrors. There are forests of wonderful trees and plains of succulent grass. There are warm days and cool nights. There are bush-covered slopes about the edge where the beasts that care to use them may take shelter from prying eyes.

Elephants wander in moderate numbers through the trees, and buffaloes make their way here and there. Hippopotami bask in the sun beside perfect pools, or sink from sight beneath the surface of the placid water. Lions in large numbers stalk their prey without making any noticeable inroads. Cheetahs course their game at will, or lie up to rest among the rocks and knolls of the southern side. Rhinos make their dim-eyed way about, snorting and charging now and then when something unusual attracts their attention, or standing half asleep in the shade of trees and bushes. Thousands of birds flock about the watering places and in the trees. Monkeys chatter and swing among the branches, while ever present are such enormous herds of antelope and zebras as to make one marvel.

On one occasion I saw a herd of wildebeests — which probably are better known to cross-word puzzle enthusiasts as gnus — the numbers of which

I could not estimate. As nearly as I could judge, the herd extended for four miles without a break. At no place in all that great length could I see an open place. One animal merged into the next until, from where I was watching them with my glasses, the line of their backs was absolutely continuous. There were at least five thousand animals actually in sight at once, not counting whatever additional number made up the farther side of the herd, which I could not see because of those that stood along the side at which I gazed.

These animals alone would have been worth the trip, for they are strangely entertaining. They graze along as if they had not a care in the world, and then, suddenly, and apparently for no cause at all, they will raise their heads and break into a furious gallop. Off across the plains they run. snorting, kicking - almost stampeding. Then one of their number will separate himself from the herd and go racing up and down beside the main column, for all the world like some excited second lieutenant with a company of men that is running away. He will snort all sorts of orders, none of which seem to have the least effect. He will make his way at furious speed up to the van. Having accomplished nothing thereby he will, with equal speed, gallop back again to the very rear. And then, with just as little reason as they had for setting off at such a pace, the herd will stop and go to grazing again, as if whatever had excited them had abruptly and completely been forgotten.



A SAFARI TREKKING ACROSS THE CRATER FLOOR



MRS. CLARK WITH A GRANT'S GAZELLE, SHOT IN THE CRATER

They are strange looking beasts too, as every one knows. They are antelope, of course, and vet they look more like cattle or buffaloes than do any of the other antelopes. Their horns are strangely kinked, their faces are strangely elongated, and their noses look for all the world as if they had inquisitively poked them in at some barn door which had closed abruptly and had squeezed them out flat. Their nostrils, too, are interesting, and are subject to much more dilation and contraction than are those of most animals. At times - particularly when some storm is filling the air with dust — their nostrils contract until they are hardly more than slits, thus making it possible for them to strain the dust-laden air through the hairs with which their nostrils are lined.

And certainly no other animal seems to have half the stamina that these wildebeests have when they are running. Most animals can be run down on horseback, if the going is good. But no horse I ever saw could keep up the pace a wildebeest sets. Off across the plains they go, and long after a horse has been worn out, they can gallop on, apparently as fresh as ever.

It was interesting to learn that we could easily tell when lions were wandering about over the crater bottom, even when they were too far away for us to make them out. So tremendous is the number of animals there that when one chooses a position up the side of the crater from which

he can see a large section of the bottom, an opening among the animals is very noticeable. There are large stretches of open plain in the crater, in addition to the two forests, the swamps, and the lakes, and so tremendous is the number of animals on this plain that a spot not covered by them is very apparent indeed. So we learned to choose points of vantage from which we could look out and down upon the herds. When no lions were in the open, the herds were scattered more or less evenly over the entire surface, but when a lion appeared, and made his way along, the other animals gave way before him, and closed in calmly enough behind, leaving a telltale circle, two hundred yards or so across, wherein we could often make out nothing whatever. With the glasses, however, we invariably found the cause of the opening, and on one occasion at sunrise, when the opening was larger than usual, we were amazed to be able to count seventeen lions as

they solemnly filed through the yielding herds.

That was surprisingly unusual. Larger packs have been seen, but they are very rare, and we determined to see what we could do in stalking them. We made our way back from where we had been watching, and headed carefully in a direction that would make it possible for us to intersect the route on which the lions appeared to be traveling. They were bound, apparently, up to the bush-covered slopes in order to rest for the day, and toward these bushes we made our

way. Yet when we reached the spot that we had chosen there were no lions to be seen.

We lay still for a time, watching carefully, and then, quite suddenly, two little cubs playfully appeared in plain sight upon a rock, and inquisitively sat there, like great big kittens, staring in our direction. That the pack knew we were about was obvious. Even the cubs knew it, but only the cubs were foolish enough to appear in the open. We could easily have gotten them, but we were not after cubs, and so we lay there watching, hoping to see one of the larger animals as it moved about. But watch as we would, none appeared, and that, to me, is proof that experience is something from which animals profit greatly. Had they instinctively hidden from us, the cubs would have done as their elders did. But there were the cubs, within easy gunshot, wondering what on earth we were and why we were about, while the grown animals remained cannily hidden, not at all certain, of course, that we were enemies, but more or less sure that we were not friends. I don't know how long we lay there waiting, and then my wife, through her glasses, saw the shoulder of a lioness among the bushes. She pointed it out to me and I took aim while she continued to tell me what she saw with the aid of her binoculars. I knew that we were not likely to get a better shot, and I finally pulled the trigger. There was a grunt that told me I had hit. The cubs disappeared in a series of awkward jumps, and instantly everything was

gone.

That the lioness was wounded I knew, and I do not like to let wounded animals escape to die lingering and painful deaths. It was up to us to follow. I must say that it was not a pleasant task. That seventeen lions were about we knew perfectly. That one was wounded we knew as well, for we had no sooner started following her than we found blood stains. Furthermore, my wife was with me, and this was her first trip to Africa. But fortunately we were accompanied by a man whose nerves were either completely missing, or were made of steel, for though he was still suffering from the effect of some serious wounds given him by a lion that had mauled him only a few weeks before, he had taken the job we offered him as our professional hunter. He was the Captain Hurst to whom I referred in Chapter One, who had, on several occasions, approached lions and "booed" at them to see if they would run.

With such a man as our companion I dared permit my wife to run a risk that I might have been more hesitant about alone or with less remarkable company, and so we followed, pushing our way through the bushes, parting the branches as we advanced, peering this way and that at every step for fear our wounded lioness — possibly with a dozen or more others — might be lingering in some neighboring thicket. I was as tense as could be, and I wondered about the front sight

on Hurst's gun. He had made a sight out-of a piece of ivory, and had put it loosely in place. It had an unfortunate faculty of falling a little to one side, so that he always slapped it back into place just before he fired. I remember thinking that if a lion came at us there, Hurst would have to act quickly indeed if he was going to slap that sight before he pulled the trigger. But apparently he was far less disturbed than I, and I suppose that sight of his worried him less than not at all. He was accustomed to it. Neither did his partly healed wounds seem to bother him, for he moved steadily along, looking this way and that, apparently no more afraid of a lion catching him than he was of catching cold.

For a strenuous three quarters of an hour we searched for that lioness, and finally were forced to give it up. I would have been less willing to do so than I was had the signs of blood not been growing less. And anyway, that lioness had made her way over such rough going that I was convinced that she was not hard hit. Certainly I hope that she was only superficially wounded, and I suspect that she was, for during several days thereafter I watched for signs of vultures in that vicinity and saw none. Had she died I believe that that telltale sign would have told me of it.

Hurst was not a man to enlarge particularly about his adventures, but I did get him to tell me about the lion that mauled him. It had happened only a few weeks before he joined our party, and

I thought that he would not be able to come on account of his injuries, but he insisted that he was all right, though he still wore some bandages.

He had come upon a lion in the open, and the beast started off. Hurst shot and missed, and the lion made a flying leap to get into some bush. Hurst let go again and hit the beast while it was in mid-air. At that the animal actually turned before it struck the ground, and the moment it lit, it came for the hunter. Hurst was using a typical elephant gun — a double-barreled rifle and of course, both shots had been fired. So sudden was the attack that he had no time to reload. So, realizing the seriousness of the situation, he thrust the muzzle into the lion's mouth. The force behind the lion's charge was so great, however, that Hurst was borne over backward on to the ground; the rifle stock snapped in two, the lion spit the gun barrel out of its mouth and stood above him for a moment. Then it stooped, seized him by the hip in its teeth, and started off with him. It took two or three steps, dropped him to the ground, coughed and fell dead directly beside the hunter. When he had dragged himself away and looked to his own wounds, Hurst examined the lion and learned that the one bullet that had struck the beast had cut through one side of its heart, and yet the animal had strength enough left almost to kill the hunter.

After Hurst left us, I am very sorry to say, he

was charged by a wounded elephant and killed. So vast is the difference between the courage of such men as Hurst and the actions of some men who take the field in Africa, that it is doubly tragic when men of his kind are killed.

I had long wished to collect a good specimen of cheetah, and there in the wonderful surroundings of Ngorongoro I had the opportunity for which I had hoped. A cheetah is a somewhat uncommon animal of peculiar interest. Although it is a cat, its claws are not catlike at all. They are, instead, almost exactly like those of a dog. These animals are tawny—almost lionlike in color—and they are spotted somewhat as leopards are. In photographs they appear very much more like leopards than they really are, for a photograph shows merely a spotted animal more or less leopardlike in shape, whereas, actually, one is hardly reminded of a leopard at all when a cheetah appears.

Their legs are long, and it is possible that they are, at least for short distances, as fast an animal as exists. In an actual contest it may be that some other animal would prove to be their equal, but certainly few animals in all the world could surpass them. Not only are they exceptionally rapid in their movements, but also they are more than normally clever. Consequently they are not the easiest of animals to obtain, especially if one is as particular as the average museum man is likely to be. Merely to kill any cheetah is likely to be

somewhat difficult, and to find and kill a fine specimen is just as likely to be quite a task.

On one occasion, there in Ngorongoro, Mrs.

On one occasion, there in Ngorongoro, Mrs. Clark and I were out before breakfast with one gun bearer, and were lying hidden among some rocks to see what we could see as the sun came up. My wife was using her binoculars and happened to pick up two tawny animals as they made their way out on to a point of vantage in order to rest for a time.

"They look like long-legged lions," she whispered, and her description was enough. I knew that they were cheetahs.

I immediately lost interest in everything else, and determined to do my best to outwit those two animals. But first I decided to give them plenty of time to get settled.

The average animal does not pick out a place to sleep and thereupon abruptly close his eyes. He looks about until he thinks he has found a place that will do and lies down, still keeping his eyes very wide open. After he has been there for a little while he is apt to decide that there are drawbacks to that particular spot, and so he moves about, trying to improve on the place. Having chosen another position, he may do the same thing again, and possibly several times, before he has satisfied himself that he is actually pretty safe. He wants to be able to see in every direction, in order that nothing may have an opportunity to slip upon him unawares, and not until

he is thoroughly satisfied does he really begin his rest. Even then his sleep is likely to be half-hearted. That almost all animals seem to sleep "with one eye open" is axiomatic.

I knew enough about animals to know that those cheetahs would go through just such a procedure, and so we lay crouched there among our rocks for an hour or more, until that pair was satisfied. But now another difficulty presented itself. To get from where we were to a position from which we could stalk them, we had to appear in the open. This, however, did not worry me. Animals will very often pay little enough attention to hunters if they keep moving and are not moving in a direction that brings them any closer. Consequently, I suggested a plan. There were three of us, and three people in Indian file are much more obvious when viewed from the side than are three people walking abreast. So I placed the native gun bearer on the side toward the cheetahs, which were a good half mile away, placed Mrs. Clark next to him, and took the third position myself. Then, quite brazenly, we made our way from our rocks, traveling along a course that led at right angles to the line from us to the animals, and all the time we kept walking steadily — for the better part of a mile — without deviating in the slightest from the course we had set ourselves. By that time we had gotten to a point from which we could not see the cheetahs, due to a small knoll that lay between them and

us. But I decided to play safe, and so we continued our march for another quarter of a mile. Then, very quietly, and with the utmost care, we swung abruptly, and made our way directly toward the animals, which we could not see now, because of the knoll, on top of which was a large flat rock. We crept slowly and carefully along until we were directly behind the rock, and I knew, from having figured the whole thing out in advance, that we must be within about fifty yards of the cheetahs.

Still we had need to be careful. The wind, it is true, was blowing from the animals to us, so they could not have our scent. We had been very quiet indeed, and no sound that we had made could possibly have carried to the cheetahs' ears. And yet I was not sure. Animals do strange things, and cheetahs are as clever as any. Already I had told my wife what to do, and carefully we placed the very tips of our rifles on top of the flat rock that hid us. Then, with the butts at our shoulders and our fingers on the triggers, we slowly raised ourselves until we could see the two cats. And it was just as I had suspected. Without our scent — without having seen us for over half an hour - without the faintest sound on which to base a suspicion, both those animals were staring directly at the rock over which we were aiming. In a flash they were off, traveling as no other animal of which I know can travel. We fired as they sped away, and by great good fortune, my



MR. CLARK WITH THE BIG CHEETAH COLLECTED IN THE CRATER OF NGORONGORO



A WABULU FAMILY AND THEIR PRIMITIVE HOUSE

bullet struck the larger of the fleeing animals as he was in mid-bound. I saw him crumple. Apparently he was killed instantly—in mid-air—but so great was his speed that as he struck the ground, he slid forward for several feet before he stopped.

I have told but little of what we saw in the crater of Ngorongoro. In three weeks' careful observation one can see a lot in such a wonderland as that. Actually Ngorongoro is a subject for a book. I want to visit it again in order to make a more complete report of its marvels, for ever since I first gazed down into its depths from that bushgrown edge, I have known that of all the places in the world, it is the most perfect for an animal refuge. Everything the animals need or want is there. That they move out occasionally is likely, and others undoubtedly move in, but it seems to me that there is little reason indeed for game to wish to leave that wonderful place. Where on the face of this earth could there be a finer preserve in which Nature would be free from the dangers of advancing civilization, where she might build up her own balance of animal life, where the game could continue to live in the future as it has lived in that long past during which the seething lava of Ngorongoro has cooled down, permitting vegetation to cover her age-old scars, inviting into that wonderful arena the thousands of head of noble animals that occupy it now? As I see it, it is a

TRAILS OF THE HUNTED

worthy task to set oneself to try to get the British Government to set aside that place, in order to rid it forever from the sound of guns.

One estimate numbers the animals within this natural zoo at fifty thousand head. Personally I believe there are more, but what difference do a few thousand make when there are so many animals that the more distant ones have faded into the blue of the heat waves long before one's eye has been able to reach across the grass-covered sections of that extraordinary place?

CHAPTER VIII

AFRICAN NATIVES AND SAFARIS

To tell only of the animals of Africa, without including in the picture the natives that are ever present, is much like staging a play with half the actors absent. Whether one is in Nairobi or on the plains, in the jungles or beside the rivers, the natives are always to be seen. One uses them to a surprising extent. They are personal servants and guards, cooks, gun bearers, and guides. Whole companies of them carry one's belongings and beat the bush for game. Furthermore, one is forever coming upon some native village wherein the dusky citizens live their simple lives, surrounded by their herds of cattle and sheep and goats.

There are many different tribes in British East Africa, and it is very interesting to ask one tribe about another. The reply is invariably that those others are *shenzis*. Now a *shenzi* is a wild man, and just as we tend to credit other nations with somewhat less civilization than we ourselves possess, so do these African natives invariably refer to all the other tribes as *shenzis*.

It is unfortunate that the work of the ethnologist has not been carried farther than it has been in Africa. Here and there some spot seems to have

been well studied, but by and large the subject has been hardly more than scratched. As to myself, I plead guilty to having devoted my time almost exclusively to animals, nor could I — because of lack of training — do anything much to further the ethnological work that has been so largely overlooked. But I defy any one with clear eyesight who visits British East Africa to miss the natives completely, and even if one's major interests are elsewhere, as mine have always been, still a surprising number of interesting experiences are likely to revolve about some chocolate-colored son of Ham — whether because of his cleverness or bravery or ability, or on account of his asininity or his childishness or his weird beliefs in devils and charms and sorcery.

Perhaps the most interesting of the natives of British East Africa are the Masai, and it was a handsome Masai askari who first made me realize that he was something more than a dull-witted savage. It was he who speared the rhino that charged Dugmore and me—the rhino that refused to turn when I fired buckshot and ball cartridge in his face, and seemed but slightly perturbed when I emptied my revolver into his massive old head. It was the Masai askari who apparently made the greatest impression on the tough old fellow by thrusting eighteen inches of his spear into the rhino's side, and it was this same askari who went after the retreating rhino despite the fact that for weapons the native had

nothing save his swordlike knife and his knobbed stick.

Whether or not his name really was Simba I do not know, but that is what I called him, although I remember thinking when first I used the name that whoever had given it to him evidently had an exaggerated idea of his courage and his strength. Simba, of course, means lion, and knowing natives no better than I did when first Simba joined us, I assumed that his courage would not match his appearance, though I had to admit that he was a wonderful specimen of African humanity.

But having seen Simba face a wounded and infuriated rhino with only a spear and a long knife, while I, with a gun that I did n't have time to reload, was leaping about spiritedly, if ungracefully, in my attempts to dodge the animal, I began to realize that there is something to such fellows besides local color and a disagreeable smell. Since then I have become acquainted with many similar "boys" in my wanderings about the plains and through the jungles. Sometimes I have been disgusted beyond words. Sometimes my admiration and interest has been more than offset by my offended olfactory nerves. But on more than one occasion I have been the whole-hearted admirer of these simple sons of the tropics as they performed their marvels of tracking or proved themselves faithful and brave to the point of facing death for me.

Luckily I have never had a man in any of my safaris killed or mauled by animals, although that happens now and then. I have had them almost killed in their personal squabbles, and it is not unusual to be called suddenly forth from one's tent by the shouts and blows of some sudden and momentarily fierce fight. Furthermore, one must expect often to sit in solemn state and fill the position of a judge while in the field.

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To get ready for the field, one must gather together his safari. To do so one goes to his agents and hires a headman and a tent boy. These two, with the cook, are largely responsible for the success of any venture. Having chosen the best available headman, one tells him the number of porters that are required, whereupon he visits the bazaar and announces to all and sundry that Bwana So-and-So, the mighty hunter, wishes to hire fifty or a hundred or more porters to go with him after game. Perhaps twice as many as are required turn up, and the headman, if he is a good one, chooses the best of these. Many he knows personally. Others he may possibly know by reputation. Others still he knows nothing whatever about. But out of that lot, the porters are picked, and are paid a trifling bit of money in advance to seal the bargain. They are given a blanket and a water bottle apiece. They are told to be ready at dawn on the morrow or the day following, in order to leave. But when dawn comes hardly a fraction of them are present. They have a natural



A "SHARI" WITH A BIG CHIEF



BELLES OF THE MERU TRIBE SEEING THEMSELVES FOR THE FIRST TIME

human desire to celebrate before they depart to spend weeks or months in the wilds, and their celebrations usually result in their being temporarily incapacitated.

Even the headman may not be about, and when, three hours after he should have been there, he finally appears, he is likely to have some extraordinary excuse. He had to purchase something for his wife, or his children are suffering from some frightful and deadly disease, or some other equally important business has delayed him. But now that he has come, he sets about gathering together his forces. One by one they are brought from the bazaar — somewhat bleary-eyed, perhaps — and by lunchtime most of them are present.

The optimistic hunter looks about and decides that he will have lunch, expecting that by the time he has finished the others will have been gathered together. But when he returns — lo, the gathering has melted. Once more they have gone, and another three or four hours must be spent in rounding them up. By four in the afternoon they have been gathered together again, and if the hunter is inexperienced he will decide to wait until the following morning to start. Not so the experienced man. 'He will start at once, even though it be so late that he can get no more than two miles from town, for he knows that once these men are in camp they become more or less responsible; at least they are likely to be present in the morning when he wants to get under way.

The newcomer to Africa will find that although he has instructed his headman to hire but a hundred men, there are a hundred and ten or twelve in his party. Inquiry brings out the fact that these porters and servants of his require porters and servants of their own. Each group of six porters is supplied with a tent and a cooking pot, and each group is likely to have — or at least to want — a "toto" of its own. "Toto", by the way, is the Swahili word for youngster, whether human or animal. In this case it means that they have a boy to carry their tent and cooking pot, to gather firewood for their fire, and to prepare their food while they are engaged in their work about camp. He is not paid — either by them or by the head of the safari. He has decided to come for the experience. After a trip of two he may be able to make a step up the social scale and become a porter himself. As to food — each group of six is given enough for their needs, and because the amount is likely to be generous, a seventh makes little

difference as he dips into the communal pot.

The wise hunter will see to it that his safari is made up of several different tribes. Invariably the members of one tribe stand together, whereas porters of other tribes are far more likely to side with their master in case of trouble with one group. If one endeavors to learn who is responsible for some difficulty, the guilty person and his tribal brethren are certain to try to keep the truth hidden. Other porters, however, are generally

ready to turn informer, for as I have said, all tribes are *shenzis* save the tribe to which the informer himself belongs.

Additional members of the safari are the askaris. These men are the soldiers of the party. They stand guard. They are authorized by the government to carry guns, though the cartridges they are given are limited in number and must be strictly accounted for. For a safari of a hundred porters there are usually about five or six askaris, and they serve more or less as lieutenants. They are the only natives who are armed. The porters themselves carry staffs to aid them as they make their way along with their fifty- or sixty-pound loads upon their heads, but they do not carry spears or swords, and guns, of course, are taboo for all natives save the askaris themselves.

Once under way with such a party, the experienced hunter will be extremely uncompromising with his natives for the first few days. Then is the time to impress upon them the fact that he is boss. The first morning out his tent boy is very apt to oversleep. Despite the fact that orders have been given to get under way at daylight, every single porter lies asleep until later. The cook may serve breakfast an hour after it should have been ready. Everything seems all wrong. And then, of all times, is the time to make an impression. The hunter must, if he values his peace of mind at later times, turn to in apparent fury. When such an experience has been looked for in

advance, when every thing has gone exactly as the hunter knows that it will go, it is sometimes difficult to keep a straight face as one threatens these grown-up children. They are so childlike. But like children, they soon learn, and one tantrum — or two at most — will serve your purpose, provided you have known how to direct your efforts. From then on, if your headman is a good one, you are likely to have a good safari, and can enjoy yourself far more than would be possible if you let that first golden opportunity slip.

So little do these natives receive that sometimes one permits himself to hire a veritable host of personal servants. There is your syce, or pony boy, your camera boy, your gun bearer and his assistant, your tent boy. Carl and Mrs. Akeley once hired a boy whose sole duty was to care for a pet monkey that they kept with them in camp. One's cook has an assistant or two, and if there is any particular job to which to assign a boy, nothing is easier.

The porters, on the other hand, make and break camp. They gather firewood. They beat the bush for game. They carry their loads on the daily marches. I have known such men to march for thirty-three miles in one day, carrying eighty pounds of load, and then have had them come in ahead of me when all I had to carry was my gun. But to me the most interesting of the natives have always been my guides. The reason for this is that



A CAMP AMONG THE THORN TREES IN TANGANYIKA TERRITORY



A REST IN THE SHADE WHILE THE SAFARI CATCHES UP

one almost invariably chooses one's guides from the inhabitants of the district in which one is hunting. Thus one gets a native who is not spoiled as are so many of those picked up in the towns. It takes very little association with white men to give the natives all sorts of fool ideas. They become a bit blasé; they love to wear the ragged, cast-off clothes of white men; they soon pick up the vices of civilization. The simpler natives of the uncivilized districts, however, still retain their natural characteristics. They are handsome in their savage costumes. They are direct and keen and unspoiled.

Living as they do in the immediate vicinity of game, many of these natives grow to have an almost uncanny ability to track the animals and to find them. On one occasion I found a Wanderobo whose language was utterly unknown to me. Neither was there a single boy in my safari who could talk to the fellow. Nevertheless, I managed, through sign language, to explain to him that I wanted him to take me to where there was game. It was interesting to watch his methods. There was only one trouble. As a tracker he approached perfection, and I was never sure that he would not lead me through the heavy undergrowth in which we were hunting until we had come absolutely up to an elephant. He could have done it. I am certain, and to him I was so marvelous and effective a hunter that he no doubt thought that all he had to do was to point out the game, leaving the rest to me. That he was a real shenzi there was no doubt, and of course, the powers of the white hunter as they had come to his ears were very, very marvelous indeed. He did not know, poor fellow, that a white hunter may have in the gun he carries all the power he needs to kill game, without knowing how to shoot so very well. So I had forever to be holding him back, lest he lead me through the bush to a point from which I might have been able to touch some big bull elephant with the very muzzle of my gun.

It was extraordinary how perfectly we understood each other, despite the fact that we had not a single word in common. Signs sometimes give one's meaning very clearly. One need only try it to see that. To stop, to move ahead or to one side, to go backward — all those ideas can be simply expressed by single motions of a hand. Where has a certain animal gone? One motion tells plainly that he is over a hill, another that he is in a valley. The guide touches his ear and you listen; he points and you look. One sign says that the animal is large, another that it is small. One suggests danger, another safety. Nor does one need a great deal of experience before he is able to carry on very well by such methods. And many times, when the bush was thick, and dangerous game was near, that Wanderobo called my attention to our quarry by no move whatever, merely holding himself motionless until I, seeing him

utterly silent, looked in the direction in which his staff was pointed.

Such experiences as these with natives are common to almost every one who goes "on safari." But further than that the average visitor to Africa rarely goes. In the field he tends to learn little enough, goodness knows, of the animals which are his major interest, and usually he learns almost nothing at all of the natives. He soon gets to the point where he accepts them as a necessary part of the picture, but a part in which he is not much interested. Not by traveling across country can one learn much of the tribes. When white men visit the native villages, the natives he sees are very likely to be anything but natural. I had been in scores of villages before I ever saw a sign of affection between two natives. But when I saw it I was impressed by the fact that the people that I had grown to accept as animal-like, were far from it. Theretofore the natives had been more interested in me than they had been in being natural.

We were on safari with the usual long string of porters, and arrived one day in a small native village where the men were permitted to drop their loads for a rest. While they were thus engaged, one of my boys happened upon his mother, whom he had not seen for several years. Neither had known where to find the other in all that time, and the meeting was touching. The mother promptly forgot the strange white men who had come from some distant land of which she knew

nothing. To her, the world centered in her son, whom she had not seen for so long. I looked on and was amazed. Never before had I seen natives embrace and kiss each other. Never before had I seen tears in a native's eyes as I saw them that day in the eyes of that wrinkled old mother. And when, half an hour later, we started on once more, the mother came with us for ten long miles through the rain that had begun, and in order to show her affection for her son, she carried his sixty-pound load upon her head, while he, with her hand upon his arm, chatted joyfully with her throughout the whole way. And when, at last, she decided to turn back, she stood for a long time on a knoll and watched us as we marched stood there raising her hand in the air from time to time as her son, carrying his own load now, turned about and raised his hand to her in filial salute.

That simple occurrence impressed me deeply, and set me to thinking about the natives. Prior to that time I had grown to accept them as almost every one does. From then on I kept my eyes somewhat more widely open, in order to see the humanness of them, which, until then, had never impressed me at all.

Since then I have heard many men who have spent a few weeks on safari generalize scandalously about the natives. They are worthless. They lie. They steal. All of these statements and many others I have heard, and I resent them.

Does a native lie? The quick way to answer such a question is merely to say yes, but it is not so much that they lie as it is that they tell you what they believe you want to know. Are there elephants in the next valley? Oh, yes, bwana, many, many elephants. But ask the same native a little later the same question in a different way. There are no elephants at all in the next valley, are there? Oh, no, bwana, no elephants at all.

They are children, mentally, and they react very much as children do. They are pleased with trifles, and have very little sense of responsibility. I have seen them during a very long hard march across a desert where there was not a drop of water to be had, pour out the contents of their canteens in order to lighten their loads. What can you do with creatures like that? They did not seem to realize that this water was essential to them, and later, when their mouths were parched, when the heat of the day had dragged them down, when they were almost fainting with exhaustion, they dropped out and sat down beside the trail, where I knew they would die of thirst, if left, and where they expected to die. I was actually forced to use a whip on them, in order to make them keep going to where water could be had, miles ahead. Yet later, on that same unfortunate journey, when for two days they had been without food in a country where game was not to be had, I was amazed to see

them close up their ranks and break into song as we approached a little village where we could get food. It was n't that they knew the food would be there. It was only that they seem to have some sort of pride in their appearance, and rarely approach a town save in close marching order—singing. It is one of their ways of showing that they can come in fresh—that they are men—real men.

One may get the impression that there are few of the softer emotions about the natives; yet that is wrong. A careless observer gets the same impression about animals. He bursts upon them and they are far more interested, for the moment, in him than in each other. The mothers have no time to caress their young. They are busy doing something else. But that does not mean that the mother has no affection for her offspring. One need only creep carefully to a commanding position and watch an animal mother when she does not know that she is being watched. Then one sees plenty of signs of mother love. And the same is true of natives.

Let a white man blunder into a village where white men's visits are rare. Naturally the mothers are more interested, at the moment, in the newcomer than they are in caressing their children. But let that same man live in the village until he is no longer new and surprising, or let him, from a distance, watch with his glasses while a group of unsuspecting natives are living their natural



MRS. CLARK WITH MASAI WOMEN TO WHOM A WHITE WOMAN IS A RARITY



COLONEL ROOSEVELT AT NYERI WATCHING A WAR DANCE

lives, and he will see a very normal amount of mother love expressing itself in much the same way as it might be expressed by any civilized mother of his own acquaintance at home.

With the natives, as well as with the game, it is the most experienced observer who is ever the least ready to lay down hard and fast rules. That the natives do not take their injuries seriously is true. That they suffer less pain from wounds seems also to be true. But I suspect that such matters are due more to their nervous make-up than to anything else. Obviously, a highly nervous person suffers more from pain than a very phlegmatic one.

I wish I understood them better than I do. I wish I could fathom their strange beliefs better than I can. That they are affectionate I feel certain, yet, among some tribes, if someone is seriously ill or very, very old, do they take care of him? Not so. Instead, they lead him out on to the plains at a distance from the village. They supply him with food and firewood and build a fire for him. So long as the sick person can keep the fire going, he is safe. But once he has grown so weak that he cannot keep the blaze up, the hyenas come. Not long thereafter there is likely to be a gruesome feast, and a member of some family or other has passed on.

I have asked why they do such things, and have been told quite frankly that should a person die within a hut, then the hut must be burned in order to rid it of the devils that have brought about the death, and all the dead person's belongings must be burned. They do not want to do such a thing, for huts and belongings, simple as they are, are valuable, so they take the frightful course that custom has brought into being. Nor do these people kill hyenas, for those creatures are, so to speak, the perambulating tombs of their ancestors, and to kill the beasts is merely another way of releasing the devils that already have been guilty of enough trouble. Yet strange and brutal as this custom is, courage among the natives is common, and they will sometimes brave death with the utmost unselfishness in order to save a friend or a master.

There are many things about the natives that I admire, but occasionally there are things about them for which I care far less. On one occasion I had a guide who, when I killed an elephant, cut off a section of the elephant's trunk, ran a string through it longitudinally, and carried it for several days over his shoulder. Needless to say, that section of trunk got very ripe indeed, and the odor was anything but pleasant, yet the fellow, from time to time, would cut a chunk off the trunk and would chew it — raw — with the utmost pleasure. I tried in every way I could to get him to throw the thing away, for it filled the whole vicinity with its odor, but he would not part with it. I even promised to shoot a zebra for him to eat, but he apparently determined

to hold on to his elephant trunk until he actually saw the zebra dead. So I had to hold up the hunt and kill the zebra before he would consent to rid himself of that semi-putrid meat.

On another occasion, after I had killed a big bull elephant, a flock of natives assembled about the carcass, waiting until I should have skinned it and have taken the tusks. There were about fifty or sixty family groups, and they sat about on their haunches for all the world like carrion crows, waiting until I should turn the carcass over to them.

Finally I had completed my task, and they went to work. With a rush the men leaped upon the skinned carcass. The elephant had been dead two days by then, but they did not seem to mind. They leaped upon it with delight, each man cutting off what he could of the meat and throwing it high over the heads of the others to where his own little family group was waiting. The air was filled with flying chunks of meat, and as each one fell, some little black fellow would dart out after it, would retrieve it, and would bring it back to the circle made by his own mother and brothers and sisters. It was amazing how rapidly that carcass disappeared. Men climbed inside the mountain of flesh in their greedy attempts to get what they could, and one man was actually blown off his feet when he stuck his knife into the gas-filled carcass and released the pressure. It was anything but a pretty picture, and I did not wait to see its completion. But the next day, when I passed that way, I found the skeleton picked clean.

That there are phases, such as this, in African native life that one cannot admire I readily admit, but there are other phases that most certainly are admirable. The bravery and skill with which a group of Nandi spearmen will surround and kill a lion is phenomenal. The pleasure that a tribe gets from its ceremonial dances is most interesting. The experience that has gone into the making of such expert trackers as one sometimes comes across is extraordinary. One cannot help admiring the enormous herds of Masai cattle. One cannot help but smile when some youngster, sent by his proud parents to pay his respects to some "all powerful" white man, stands erect but with bowed head, until the "great man" places his hand upon the child's head in a graceful little ceremony that, perhaps, signifies that a blessing of sorts has been conveyed.

Some day, perhaps, I shall know the African natives better than I do now. Some day I may have made more headway in understanding them, but if I ever do, of one thing I feel certain. They will prove to be more and more human as I learn more about them. They will become, in my eyes, more and more likable, less and less "worthless." The trouble with the natives of Africa is, I believe, far less with the natives themselves than with the careless, supercritical observers who are so prone to announce their untrue generalities.

Time was, not so many years ago, when few men could afford either the time or the money for a trip to Africa. Nowadays, however, a man need not be so very wealthy to pay for such a trip and with express steamers and automobiles at his command he can dash from London or New York or Chicago to Mombasa, can take the train to Nairobi, can get into an automobile that has been made ready for him as a result of a letter or a cablegram that he has sent, and with a professional white hunter to attend to the details and to lead him to where game is to be found, with half a dozen natives riding on top of the load in order to serve as cooks and tent boys, gun bearers, et cetera, he can cover an amazing lot of ground and obtain what trophies he desires in very little time.

Such a hunter, however, never sees the real Africa. How can he, bursting as he does into and out of native villages, ever get more than a glimpse of native life? What chance has he ever to become acquainted with the country as do those who make their hunting trips on foot covering in a week distances that the "hurry-up" hunters cover in a day? No observer can obtain what he desires from any such methods. To take an automobile on safari is, in my eyes, the best way to ruin the whole thing. Now and then, of course, a hurried journey may be taken thus, but only when one realizes that in so doing he is seeing nothing along the way. But more and

TRAILS OF THE HUNTED

more such hunters are rushing to Africa and rushing away again, in order to be able to assure themselves and their friends that they have been there and shot this and that. From these tourists the public obtains a large part of its ideas of African animals and African natives. It is unfortunate, and undoubtedly it will go on, but luckily there are others whose visits are more prolonged, whose journeys in that land are more worth while, and upon their observations a real understanding and appreciation of Africa depends.

CHAPTER IX

BUFFALOES

It is the general consensus of opinion among men experienced in African hunting that the buffalo is the most dangerous of all the game of that great continent, and with that I am in accord. The buffalo is a large and a very powerful animal. It is remarkably quick in its movements, and its senses are especially acute. These characteristics, however, are not what make it dangerous. The eyesight of a giraffe is keener. The hearing and sense of smell of the average elephant equal those of a buffalo. The power and size of both elephants and rhinos are greater. But in none of these animals is there the same degree of malevolence. The charge of a buffalo — and he is prone to charge whether wounded or not — is inexorable, utterly relentless. A man may be mauled by a lion or an elephant, but neither of these animals is likely to carry his attack through to such an utter and irreparable end. Men who have been mauled by lions are not rare in Africa. Men who have been mauled by buffaloes, on the other hand, very rarely indeed live to tell of it. So terrific and vengeful is the attack of a buffalo that there is rarely more than a memory left of a man if he is unable to get out of the way. No trifling bit of his torn body is too insignificant for the buffalo to wreak his vengeance on, and when, after hours of bloody trampling and tossing, the beast finally completes his spiteful task, nothing save a pawed and bloody spot remains to tell of the existence of the unfortunate hunter.

These animals are individually dangerous, and added to that, they live in herds, which makes the danger all the greater. Furthermore, they delight to dwell in bush-covered country and among the tall reeds and grasses of swamps. Sometimes, it is true, they linger in the open, but it has been my experience to hunt them in undergrowth so thick that I have come to within twelve or fifteen or eighteen yards of them before I knew just where they were, and on at least one occasion I was suddenly charged by a small herd of them when I not only did not dream that they were about, but also was after something quite different.

It was while I was with Cherrie Kearton in 1909 that that adventure occurred. We were in a more or less waterless country, and I was wondering just which way we should travel in order to find a water hole. After quite a little searching about I found a satisfactory one, and, because the supplies for our "boys" were running low, I decided to look for a farm that we were told was near by, in order to send some one to it for "posho", or meal. There was a hill not far away and I thought that from its summit I might be able to see the farm, so with my gun bearer I set out, thinking

little enough of game, but keeping my eyes open, for only the preceding day we had blundered upon a couple of rhinos.

One must always keep his eyes open when he is in the game country. Rhinos have an extraordinary habit of turning up at unexpected places, and other animals, as well, might be in one's way. So, only because it had come to be a habit, I had my eyes open, and as we made our way through the scrub growth which covered the country all about, I suddenly caught sight of a bush buck. He was not far off, and I wondered for a moment whether or not we needed meat in camp. But before I had reached a decision as to what to do, I heard a rapid and very suggestive series of movements only a little way off through the bush. My first thought was that some rhino had caught our wind and was on a rampage, but my mind was quickly disabused of that, for the sounds were very different from those a rhino would make, and no puffing and snorting accompanied them. My boy called something to me from where he was following a little way behind, but I failed to understand him, and then I heard the sound of galloping feet just behind me and to the right. I glanced over my shoulder and could make out through the bush three black masses coming straight in my direction.

They were buffaloes and were already too close for me to turn, in an attempt to stop them and, besides, I had only my light rifle. There was but one thing left to do and this I had to do quickly, even though it seemed foolish. This was to make a dash through an open space toward the only little tree in sight, in order to get behind it for what protection it could offer.

It did not take me long to get into action and I dashed away, fully aware that I was exposing myself to the full view of the galloping beasts, and wondering if I could reach the tree before they overtook me. Between me and the little tree was a line of thin bush that offered no obstacle as I dashed in the direction I had chosen. I could not stop to choose my path, however, and suddenly I realized that I was falling through bush-filled space. Just what had happened I could not tell until I lit abruptly and found myself at the bottom of a deep and narrow gully with the bushes on one side and the tree I had chosen on the other. Fearful of the buffaloes coming down on top of me at any moment, I clambered up the farther sandy bank with all my speed and swung myself behind the tiny tree, while I regained a hurried breath as I tried to locate my pursuers.

Their heads were tossing as they pawed the ground and bellowed on the opposite side of the gulley, but they came no farther. I was safe. As I moved to bring my gun to my shoulder they suddenly bolted and turned into the bush. I gave them a farewell shot to help them on their way — more from instinct, however, than with any idea of bringing one of them down.

How my gun bearer managed to escape their charge I never did find out. I found him a little later, and I suppose that he had located a tree some place about. He never enlarged upon what happened to him, but unless my eyesight had momentarily gone bad, his color was a little lighter when I found him again than it had been when I had seen him last.

That is the danger of hunting in the bush. One never knows when something of the kind is likely to occur, and still that did not teach me a lesson. Only four or five months later I went into much the same kind of country — this time actually to hunt buffaloes.

A Wanderobo named Mlafu — The Long One — was my guide, and his name suited him to a T. He was six feet or more tall, and his slenderness accentuated his height. Furthermore, he was no sophisticated native, dressed in some white man's cast-off garments. He was as natural as the animals themselves, and was dressed — if one calls it that — exactly as his tribe has dressed since time immemorial. He was a real shenzi, untouched by civilization; and to my mind such a man is perfect, when to his unspoiled native point of view is added the ability of the natural tracker and hunter.

It must not be supposed that every native is a good tracker and a good hunter. That is far from the truth. There are as many differences among natives as among white people. Only now and then does one find a "natural born" native hunter, just as one finds a hunter only now and then here in the United States. But Mlafu — The Long One — was one of these. He knew the animals. He understood them. I believe that he loved them, not in any namby-pamby fashion, of course, for he was a native African wild man. But he loved to watch them and to study them. He rarely missed an opportunity to study them, and, for all I know, he had done that all his life, with the result that he knew things about animals that I shall never know.

So with Mlafu I was going into the bush after buffaloes, which, I suspect, was not the most sensible thing in the world, but I needed a buffalo and there were none near save that one herd, which rarely went into the open. However, I recalled my experience of a few months before and talked with Mlafu about it. We conversed largely with signs, but we understood each other, and after we had carried on quite a conversation, Mlafu rose and departed. Just where he was going or what he was going to do I did not know, but in an hour or two he returned, accompanied by two more Wanderobo hunters, the three of them making a wonderful group — their chocolate-colored skins glistening with the oil that they had rubbed over themselves, their ears pulled out of shape with the heavy earrings that hung in the big slits they had cut, their bows and their long arrows that were curiously feathered and pointed,

their breechclouts tucked around their gee strings in order that they might be out of the way.

Now Mlafu announced that he was ready to start early on the following morning, and to take me into the bush where the herd of buffaloes dwelt. Furthermore, he told me plainly, through his sign language and with a word now and then, that that herd was particularly bad. I had been told the same thing before by a game ranger, but had taken the statement with a grain of salt. But now that Mlafu told me I somehow believed him.

We left camp at the first suggestion of day the following morning, and it was the moon that gave us our light at first. Daylight soon came, however, and we went direct to a swamp where the buffaloes made it a habit to feed. There we picked up the tracks, and we followed them until ten o'clock, when they took us off into the hills into some very thick brush.

It was fascinating to watch those three natives work. Mlafu sent one of them off in each direction for twenty or thirty yards, while I followed directly behind him. We could see neither of the guides that were on our flanks, and I wondered what good they would do out there, but finally I got the hang of it.

In that thick growth, a single person, or two moving together, might actually pass between scattered buffaloes and get to a position where buffaloes were in every direction at once, and it all might happen without the hunters knowing that buffaloes were near. If such a thing occurred, the chances would be excellent that the hunters would never get out alive. But with a man stationed twenty yards or so on each flank, there was little likelihood that we would blunder into the middle of a herd. Still I could not see how Mlafu could possibly know what his assistants were doing, and then I heard a peculiar whistle from off in the brush. Mlafu paused and whistled a short reply. It was almost as if he had whistled the one word "What?" Instantly the whistle came again — the same notes in the same sequence, and a little louder. Mlafu answered with a lower note and held up his hand to me. We paused and he peered forward. Now and then a whistle would come from one side or the other, to which Mlafu replied. Now and then he would whistle what was, apparently, an order. We moved forward and stopped, according to those whistles. Slowly, one step at a time, we made our way through that thick growth. Not a twig snapped beneath our feet. There was not a sound save those sounds of the whistles. Obviously the natives had learned that their whistling did not make the animals suspicious. It sounded a little as if birds were whistling, and I suppose that the animals take it for that. At any rate, those guides did not disturb the buffaloes.

Now and then Mlafu would point and hold up his fingers — one or two or three or four — signifying

that as many buffaloes were off in that direction, though how he knew I cannot guess. Then on we would creep, still without a sight of a single one of the animals.

A whistled order caused the two flanking guides to drop back, until we were moving forward like a wedge, with Mlafu and myself at the point. Now and then, as I sniffed the air, I could smell buffaloes. We were as close as that, and still we had seen nothing. Then, quite suddenly Mlafu stopped, with his finger up to signal to me to remain silent. For half a minute he stood motionless, his finger in the air, his eyes, so far as I could make out, directed ahead of us. Then, very slowly, he stooped, gathered a bit of dust in his hand, held his arm high, and let the dust sift from his fingers. As the light powder drifted off on a gentle current of air it gave us the direction of the "wind."

With the greatest care he turned and pointed through the bush at an angle backward. That there was a buffalo somewhere back there was what he meant, though how he knew it was a mystery to me. He moved forward for six or eight feet in the direction in which we had been going, looked closely at the ground, and turned an acute angle, facing back and a little to my right. For five or six feet he moved silently in that new direction, and then I saw him "freeze", and saw his bow slowly take a direction that I knew was meant to indicate some animal.

I followed him carefully, forced by the brush to follow in his footsteps, and when I had crept up until I was directly behind him I sighted along the line of his bow — and could see nothing. Leaves — branches — nothing more.

Yet there he stood, as motionless as a bronze, pointing. My eyesight was at fault, I knew, so I raised my binoculars and looked carefully in the direction his bow indicated. Then I saw it, but I would have missed it had it not moved. A buffalo's ear was visible through the leaves, and as it flicked backward and forward once or twice I caught sight of it. An ear — that was all.

I crept forward until I was in front of my guide. I tried to figure out where the head was from that ear, but I could not. And then, as the animal moved its head a trifle, I made out the tip of a horn. Now I had two points from which to plot the rest. In my mind's eye I drew the shape of that buffalo's head upon the leaves, basing it upon the horn tip and the ear. Then, with as much care as I have ever used in hunting, I aimed. I was not more than eighteen yards from the animal, and was on a narrow game trail. Perhaps the twisting trail led to where the buffalo stood, and if I missed, or only wounded the beast, it might charge directly down that path.

I determined not to miss and pulled the trigger. The sharp report broke the stillness, and instantly bedlam broke loose. Within a second of the time of my shot, I saw black bodies shooting past through the brush. How many there were I cannot guess. One is always likely to overestimate at a time like that. But whether it was half a dozen or twenty, there were that many too many, and they moved at a fearful pace. I remember wondering at the time why one of them did n't get us, and not until later did I learn why.

Then, as quickly as they had appeared, they disappeared. I heard the sounds of their movements dying away in the distance, and I gave my attention once more to the one that was down. I had made a hit. There was no doubt of that, for I had heard the beast fall. It was up to me to approach and put in another shot, for fear the wounded creature would charge or get away. I crept along the trail and saw the animal. Another shot was not necessary, and I began to see why the charging beasts had missed me. The one I had shot had fallen directly in the trail, with the result that those behind had been forced from the trail by the wounded buffalo. That, I suspect, was the only thing that saved Mlafu and me. Luckily my knowledge of a buffalo's anatomy had served me well, for my plotting had been correct and my bullet had pierced his brain just between his eyes.

The other two guides appeared then, with grins on their faces. Where they had been during the fuss I do not know, but they had taken care of themselves. But I was glad that I had my buffalo.

One needs to rest one's nerves after an experience like that.

There are many things about animals for which it is difficult to find a reason and about which, sometimes, it is hard to find a reasonable theory. With buffaloes, the best theory, I believe, is always to expect the worst, and to prepare against it in the best possible way. With other animals the difficulty generally is not that they are dangerous, but that one cannot get close enough to them. That is particularly true when one is hunting with a camera.

While I was with Dugmore we had occasion to try to outwit a large herd of hippopotami, which certainly are not dangerous — unless one happens to get between them and water, which is tantamount to standing in the way of a heavily laden truck. We had no desire to kill any of the creatures. We merely wished to photograph them, but if any one thinks that a hippo poses readily for his picture, he need only try to get him to do so.

We tried night after night to get flashlight photos of them as they came ashore to feed, but without any success whatever. On one occasion, while we were in a *boma* watching for a hippo to trip the string we had stretched, we were surprised by a rush and a splash that coincided with the boom and flare of our flashlight.

We thought that at last we had gotten our much-desired picture, and we crept out of the boma

in order to set the flash again, when, hardly more than ten feet from our boma, we saw a dozen or so spots of light. They appeared to be glowing coals, yet how glowing coals could have come there we could not guess. They could not possibly have come from our flashlight, for that was some distance away, yet the strange spots of light obviously were not the glowing eyes of animals. It was decidedly unusual, which made us suspicious, and our minds were working rapidly.

My eyes searched about those glowing spots again. They covered a ten-foot circle, but they did not move. Yes! One moved. It was larger than the rest — and higher. It was three or four feet from the ground — perhaps more. It moved slowly to the right, then to the left, then it stopped. I aimed my gun and almost pulled the trigger, yet I dared not. It was too mysterious, and what on earth was there I could not guess.

I shouted — why, I don't know. "Who's there?"

There was not a sound.

I stopped, in order to get some telltale sign against the sky line, if possible. I saw something, but what it was I could not make out, for the night was inky black. It moved again, and somehow I sensed what it was.

"Look out, it's a man," I whispered to Dugmore, but who the man was or what he was doing there I could not guess. Thoughts of all the stories I had ever heard of bad natives tried to get into my mind. I dared not shoot for fear of precipitating an attack. I dared not wait, for fear of a flurry of spears.

I decided to challenge whoever it was once more before I fired.

I called again. No sound. Again. Silence, and then a native voice came out of the dark.

"Who are you?" I demanded.

"Of the Wakamba tribe," came the reply.

"Do you live near here?"

"No."

"Why are you here at such a time?"

"Traveling."

I began to see what it was, then, and by the time our conversation had been completed, we found that three natives were traveling along a trail that led within a dozen feet of our boma. Their bare feet had made no sound as they passed by, and each of them was carrying a little bundle of firesticks — made of wood that burns as punk burns, with a glow on the end. These spots of fire serve to protect night travelers from the attacks of animals, and the men were traveling in the coolness of the night rather than in the heat of the day.

By a strange coincidence they had happened by as a hippo was feeding near, and perhaps they had frightened him so that he rushed for the water and set off our flashlight. With the natives hardly twenty feet from the blinding glare it is not surprising that they dropped their punk sticks, nor was it surprising that they were too frightened to reply when we spoke to them. We laughed when they had gone on, for even if we had frightened them and they us, we had secured a flashlight of a hippo after trying for a week.

But the next day, after we had developed the negative, we laughed from the other sides of our mouths. The hippo had been frightened too, and he had been moving so rapidly when the flash went off that his image on the plate was nothing but a shapeless and utterly useless blur.

went off that his image on the plate was nothing but a shapeless and utterly useless blur.

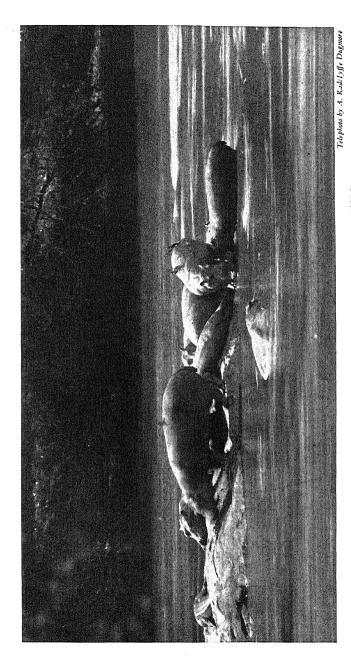
We decided, after that experience, that flashlight photography of hippos was not likely to be successful, and we determined to get them in daylight if possible. We found a pool where the animals were numerous, and one bright day we crept up to the bushes that lined it. With the utmost care Dugmore took telephoto pictures of ten or a dozen hippos that were sunning themselves on a rock not far from shore, and having gotten all of those we wanted, we determined to risk a move closer. Very, very carefully we moved forward. We were extraordinarily cautious, and each time we reached a new point of vantage we took more pictures. The hippos seemed to pay no attention whatever to us, and we prided ourselves on our care and ability as stalkers. Closer and closer to the river bank we crept, until we had gotten all the pictures Dugmore cared to take. Then, caring little or nothing whether or not we frightened them into the water, we stepped

boldly out into the open, sat down on the bank where it dropped directly into the water — sat there with our feet hanging over and took more pictures. We laughed and talked with no attempt to keep our voices low, and all the time the hippos dozed out there on their rock twenty or thirty yards from us. Nor did we frighten them into the water when we left.

On the opposite side of the river a troop of monkeys trotted noisily down the river bank and drank. Another troop sat on a branch like sparrows on a telephone wire, chattering like mad. A herd of impallas grazed in an open spot in plain sight, and a bush buck calmly glanced across the river at us from time to time. Yet through it all the hippos paid no attention to us, and Dugmore got such a series of pictures as he had never hoped to get.

It was not until the sun was dropping toward the west that we left, and next day Dugmore could not resist the temptation to take still other pictures of that herd. We stalked them carefully again, but the moment our eyes fell upon them they slid into the water. Again and again we tried it, and never were we able to get a single additional picture. We were as cautious as we had been before. We were silent. We used every artifice of which we knew, and all to no purpose. Never again would that herd pose for us.

It is hard to see why the same beasts act so differently at different times. I suspect that it may



HIPPOPOTAMI IN THE TANA RIVER

be that animals sometimes recognize as an enemy something seen at a distance, whereas the same object, seen close by, may impress them differently. It is almost as if they did not look at objects within a certain imaginary circle, but kept their eyes on dangers beyond that area. If my theory is true it certainly is not invariably true, but possibly if you succeed in getting so close to an animal without his seeing you as to get within that "safe area", so to speak, he will no longer consider you a danger. That may sound a little weak as a theory, yet I have seen the same thing happen more than once, and in connection with that herd of hippos I prefer that theory to the only one that has occurred to me. The other theory is merely that, seeing monkeys on one side of the river, the hippos thought that two of the noisy creatures had somehow gotten to the other side.

I know a few things about animals, but there are many, many questions to which I never have received a reasonable reply. Why is it that a hunter, when he approaches game in thick bush, as we approached the buffaloes, dares not make a sound, although the buffaloes might be breaking twigs, tossing branches, stamping, and snorting? How is it that the herd is instantly suspicious when I step on a twig and break it, whereas a hundred twigs can snap beneath the feet of their own members without alarming them? Why is it that an animal will often not look up at all

when one of his own kind blunders suddenly through the bush, and will dart off at top speed if a hunter nearby makes a tithe of the same noise? How is it that they grow suspicious when you are certain that they have not seen you, that they have not heard you, and when the wind has made it impossible for them to get your scent? What sense have they that men do not have? How is it that one's most careful stalking will fail when no known sense could have warned the animal of the danger?

These are a few questions that I have often asked myself. I hope to be able to visit Africa again, in order that I may obtain, if possible, some clue to such puzzles as these — some clue to the ever present conundrum of the amazing cleverness of many of Africa's finest native citizens.

CHAPTER X

American Game

IT must not be supposed that Africa, despite its marvelous herds, its powerful and majestic animals, and its variegated animal life, is the only interesting field for those interested in wild life. On more than one occasion I have talked with men who have bemoaned their sad fate at not being able to visit Africa when, they said, they were so vastly interested in animal life; and when I have pointed out that during a two weeks' vacation they might visit hunting grounds nearer home, where they could find animals as majestic as any in Africa, save only elephants, they have stared as if they wondered what had happened to my common sense. Yet here in America there are animals that surpass anything of the kind that Africa has to offer.

Ask the average person what carnivorous animal is the largest and the most powerful in the world, and he is very likely to tell you that those honors would go to the African lion, or the Asiatic tiger, or possibly to both. Yet he would be wrong. It is in North America that the largest carnivore dwells, and he is very much more powerful than a lion, and is at least as dangerous. He is no other than the great brown bear of

Alaska, which, bedtime stories to the contrary, is no gentle creature waiting in pleasant glades for some tourist to feed him peanuts. The bears of Kodiak Island, Alaska, are perhaps a little larger than any others, but any grizzly is plenty large enough. In pleasant glades he may be found, but should you come across him, do not take unnecessary chances. He is extraordinarily powerful. He is amazingly swift. Furthermore, he is very brave, indeed, and is as clever an animal as one is likely to find any place in the world. He does not live on a diet of blackberries and honey alone, but is very likely to pull down a cow or a calf, a deer or even a moose. A guide I once had in Alberta told me that he had once seen a grizzly being pestered by four black bears. One black bear slipped, the grizzly seized him, broke his back with one huge hug, chased the others away, and proceeded to feed upon the berries again as if nothing had happened.

Of course, bears do not confine their diet to meat. They will, in fact, eat anything at all—berries, grass, honey, roots, marmots, cattle, and an infinite variety of other things. And of all the animals I know, grizzlies are almost the most difficult to hunt. As a matter of fact, save in districts where they are exceptionally numerous, it is almost hopeless to hunt for them. One will find them, occasionally, but rarely by looking for them. There are two or three districts in Alaska and British Columbia where they may be found

more or less readily, and in the spring they are easier to locate than in the fall, but usually one gets his bear when actually he is devoting most of his time to something else.

The first grizzly I ever got took a good deal of hunting. I had been in the field for two weeks, coming across deer and black bear now and then, seeing a brown bear occasionally, and getting all excited almost every day when we saw heavy-bodied ambling figures in the distance across the rock slides on the sides of the Alberta Mountains among which we were hunting. We would examine those beasts with our glasses, would decide that they were bears, would stalk them most carefully, and then, when we poked our noses out from some cover or other, would find that what we took for grizzlies were, in reality, nothing more dangerous than porcupines. Because, on the rock slides, there was nothing with which we could compare their size, we were often fooled. Just as I later sometimes mistook wart hogs for rhinos in Africa, so, on that trip, I was forever taking porcupines for grizzlies.

It was discouraging work, for never a grizzly did we see, until, about seven-thirty one evening, while we were coming back to camp from the usual day's round, Clausen, my guide, spied a big animal high up a steep mountain side. At first I was suspicious, thinking that it was merely another porcupine, for the sun was low in the west and the light was not the best, but Clausen

insisted, and so we dismounted, tied our horses to a tree, and set about to stalk the fellow.

We climbed silently up the grade through the timber, over fallen trees, through draws crowded with alder and willow, sliding on our bellies across open places, making our way on our hands and knees through underbrush, until we finally reached a little knoll hardly more than a hundred and fifty yards from the unsuspicious bear. He was busily engaged feeding on the fresh green grass, for the month was May, and he had only recently reappeared after his all-winter hibernation.

We dared approach no closer, for the rest of the way was devoid of cover, yet a hundred and fifty yards seemed a very long way to me. Still, there was the grizzly I had come for, and two weeks' experience had shown that they were not to be had every day. So I stood and aimed as carefully as I could, and pulled the trigger. The shot was exceptionally successful, for it brought him rolling and kicking down the slope for fifty yards or more, while I, not knowing whether he would regain his footing and come for us or not, stood ready to fire again if necessary. When he finally stopped rolling, however, he lay perfectly still, and Clausen and I climbed up the steep grade to where he had stopped.

He was not a very large specimen, and yet he was no midget. He measured five feet eight inches in length, and despite his long winter fast, from

which he had had no opportunity to recover, he was a powerfully muscled brute. But I was particularly interested in the fact that he had been eating porcupines, for his mouth was stuck full of porcupine quills. How he ever managed to keep on eating with those sharp darts in the fleshy parts of his mouth I do not know, but apparently they had bothered him little enough, despite the fact that the wounds from the quills had festered, and must have been painful.

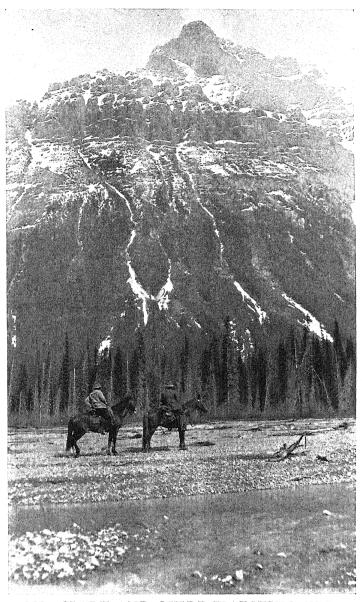
Several years later, while on a Museum collecting expedition in upper British Columbia with my wife, we had a more interesting experience. It was about the middle of September, 1925, and at the altitude at which we were hunting it was cold. The time was ripe for grizzlies, for they would be in fine condition at that time of the year, but we knew enough not to waste time looking for them. The major reason for our trip was to collect a group of Osborn caribou.

The Osborn caribou is the finest and largest in body and horns of all the great caribou group. Since the type specimen was collected and brought to the American Museum by Andrew J. Stone about the year 1900, no other specimens have come to the Museum. They were named in honor of President Henry Fairfield Osborn, then vice president of the American Museum, and it was at his request that I went to secure a group to represent the great caribou family in our Hall of North American Mammals.

But a big grizzly from those mountains was something we hoped to get also, though we were spending no time on a bear hunt alone. Nevertheless, we were constantly on the lookout. Snow covered everything and the thermometer was way below freezing, but we were out early and had hunted up and down hill until we were worn out. Having seen nothing, we decided to return to camp when our Indian cook met us and told us that a big grizzly had gone over the hill back of camp only half an hour before.

It is remarkable how one can throw off one's fatigue when a prize like that is in the offing, and without a pause we set off up a steep hill with the guide leading. After a mile or so we crossed the summit, and gazed down into a big, deep valley and saw, part way down the side, that the guide, who had made better time than we, was sitting down, peering over a ledge with his glasses. When we approached him he told us that the bear was no longer in sight, but even while he was talking, Mrs. Clark spied the animal among some thin brush. He was about three quarters of a mile away, and we hurried down hill toward him.

He did not seem suspicious, though we were in sight most of the time. Finally we dropped into some brush and our guide was able to take us up to within about forty yards of him. We peered over a little knoll and saw him feeding in the open, and together, Mrs. Clark and I advanced.



MR. CLARK AND GUIDE WATCHING THE SLOPES IN ALBERTA FOR GRIZZLY BEAR

It is likely to be dangerous if a grizzly at such a distance is only wounded, but Mrs. Clark was as eager to get him as I was to have her do so. We halted, and Mrs. Clark fired.

The bear squealed like a pig and turned two or three somersaults, while I held my fire until he got to his feet again, and was disappearing in the brush. At that I fired, and hit him, though the shock did not knock him down again, and with extraordinary speed he darted down hill and disappeared into a thicket. Our two guides, both of whom had now joined us, told us that certainly he had gone for good.

But I had no intention of letting him get away, wounded as he was, and Mrs. Clark felt the same way about it, so we tried to locate his trail. It was dangerous, I knew, poking about in the brush with a wounded animal far larger and more powerful than any lion somewhere about. We could see only a little way at a time, yet for half an hour we combed that hillside, and were almost ready to give up when one of the guides found a bloodstain. The ground was frozen, and in the shelter of the thicket there was no snow, so without the bloodstains we could never have followed him. Even after finding them, we were able to follow them for only a few yards, when we lost them again.

And then one of the guides saw something only a little way ahead, and we made it out to be the bear. With him that close, I was a bit fearful, and I fired again — for we did not know whether he was dead or not — but he did n't move, and we went up to him.

He was a very large animal, measuring seven feet two inches from nose to tail. The pad of his front foot was seven inches across, and his head was wonderfully massive. Mrs. Clark's one shot had proved fatal, bringing him down in less than fifty yards.

These bears are the only really dangerous animals in America, yet that does not mean that there are no other animals of interest. We learned on the same trip on which we got that big fellow that Osborn caribou are fascinating and very clever. When first we entered that country and caught fleeting glimpses of those animals running swiftly along the ridges, I was downright discouraged, for it looked as if we never would be able to get our group. Yet ultimately, after a lot of heart-breaking labor, my wife shot a handsome bull, I got one, we bagged a young bull, a young cow and an old cow, and finally came out with a group that is exceptionally valuable for the Museum.

The old cow was the hardest to get, for we rarely were able to tell whether the animal we had picked out was a cow or a young bull. Finally I determined to find a herd, pick out the leader, and thus get my old cow, for I knew that among caribou, just as with other animals, a cow always leads.



MR. AND MRS. CLARK WITH A BIG GRIZZLY BEAR BAGGED BY MRS. CLARK



MRS. CLARK WITH A FINE BULL CARIBOU

Once I decided on that method we obtained the specimen we desired, though until I used that common-sense course, we seemingly were checkmated.

And yet, hard as those animals were to get, they sometimes did strange things. On one occasion we sighted a herd and crept up to a point beyond which we could not go, save in the open. So we determined to try that. Nor did we try any fancy tactics. Instead, we boldly made our way into the open directly toward them. As we came closer, we saw that there were none in the herd that we wanted, but we determined to carry our experiment out just the same. They raised their heads and stared at us, decided that we were nothing particularly dangerous, and went on feeding. Closer and closer we came, and then they raised their heads, stretched casually, and advanced to meet us. I suppose they came within sixty or seventy yards, and then they halted. We stopped, too, and for a moment they stared at us. Following that, they began to circle about us, keeping at about the same distance, and they moved about in fully two thirds of the circumference of a circle before, finally, they got our wind, whereupon they jumped as if terribly startled, and fled away like mad, disappearing in hardly more than a few seconds.

Caribou, of course, travel in herds, and it was these herds that we had to stalk in order to get the specimens for the Osborn Caribou Group. But many American animals travel alone, and I have found it common for lone animals to watch their own back trails much more carefully than herds are likely to do. I have never seen any animal do it more consistently and cleverly, however, than the mule deer of our own West. On one occasion I had caught a glimpse of one and I followed him. He apparently realized that I was not so fast as he, for he made no great speed as he disappeared, but I followed his trail, wondering just what he would do. I was not interested in getting him. I merely wanted to study him, and I got a chance that day. He made his way diagonally up a slope, finally disappearing among some rocks, while I made my way after him. But I knew what mule deer are likely to do, and so I kept my eyes on a ledge of rock that towered several hundred feet above the trail, halfway up the slope. True, the deer had seemed to be going diagonally away from that ledge, but I suspected him, just the same, and, sure enough, only a few minutes after he had disappeared among the rocks, I saw an antlered head peer over the edge of the ledge that I had picked out.

I kept on along his trail, watching him out of the corner of my eye, thinking I could stalk him. I disappeared from his sight and made my way indirectly to the ledge, but when I got there, there was no deer. The snow was matted where he had been lying while he looked down the slope, but when I had disappeared from view he had gotten up and moved on. Once more I saw him doing much the same thing — making his way to a spot at which he disappeared, only to peer over another ledge that again commanded his back trail. Three times he did that, during the afternoon, until I grew tired of clambering among the rocks and left him. But even when I had gone down once more into the valley, I turned about and with my binoculars, saw him standing on the last ledge he had located, watching me as I contentedly made my way back to camp.

Of all the antlered tribes, however, the moose is easily the most majestic. That the extinct Irish elk surpassed him in majesty is true, for those wonderful beasts sometimes had antlers spreading ten and even eleven feet from tip to tip. But save for that one species, the moose is supreme among all antlered game.

It is fascinating to follow them through the woods or to see them swimming in the rivers and lakes. I suspect that few people know that a moose often wades into the water until the depth is over his head, and then proceeds to disappear beneath the surface in order to feed upon the lily shoots and other submarine vegetation. That they are great swimmers is, of course, common knowledge. That they are prone to feed beneath the water is, perhaps, less commonly known.

It is quite surprising for a person to see for the first time a moose disappear beneath the water. A hippo somehow fits the picture. He seems made

for such a task, as a frog is, but though I have many times seen moose disappear and reappear, I have never grown entirely accustomed to the sight.

They are powerful beasts, and one need only see one making his way through some bog to realize that fact. He may sink to his knees, and to the hunter following him the going is very hard indeed. Yet many times I have actually seen them trot lightly through such going, flinging their feet forward as if nothing was there to impede them in the slightest.

Now few animals are larger than moose. One might think that their great black bodies would be easy to see, even in the woods. Yet they are not. I have come within a stone's throw of them without seeing them, and have learned of their presence only when they have gone crashing away through the brush. Even in the open glades I have looked and looked, and have failed to see them until they have moved.

Moose are not dangerous in the sense that they will attack, yet one should be very sure that such an animal is dead before approaching it. A friend of mine once approached a moose that he had shot, only to have the beast spring to his feet and hook at him most viciously with his wide-spreading antlers. Luckily, the tip of one horn came no closer than the hunter's belt, but it caught there and sent him sprawling ten feet away. Another inch or so and a very different story would have remained to tell.

Of course, in hunting for such animals as moose, one is likely to come upon other denizens of the woods. That is one of the interesting things about hunting, and in just that way I have learned many interesting little facts. In New Brunswick several years ago, while I was hunting moose, I approached a corduroy logging road, and saw, through the bushes, a red fox trotting along the road with his head down, for all the world like Brer Fox in Uncle Remus' stories. I had no desire to shoot him, but I did want to try out an experiment of which I had heard, so I put my fingers to my mouth and did my best to imitate the squeaking of a field mouse. The fox was making his way along the road and was at least fifty yards away, but instantly he stopped and raised his head. I remained silent behind the bush that shielded me, and in a moment he dropped his head and went trotting on once more. Again I squeaked, and again he stopped. I squeaked once more, and he put his head on one side and cocked his ears, while his tongue lolled out of his mouth, as if some dainty morsel like a field mouse would appeal to him tremendously. I repeated the sound, and he trotted back in the general direction of the bush that shielded me until he had come to within hardly more than a dozen feet. Then his attitude changed, and his motions became more careful. Again I squeaked, and he came silently toward the bush, his tail fluffed out, his feet moving slowly. his nose out far ahead, and his eyes bright. He

was convinced that a very little digging would bring him a meal. I waited until he was only a little way on the other side of the bush, and then I clapped my hands together and shouted at him. Just one red blur told of his departure.

The first really serious hunting trip on which I ever went was one that took us to Wyoming after pronghorn antelope. Ned Frost, who is probably the best known guide in America, accompanied me, and I was the first "dude" ever taken out by Frost and Richards, who since that time have come to be "dude ranchers" par excellence.

Pronghorn antelopes are, perhaps, America's most unique animals. They are true antelopes, of course, and their horns are built over bony cores, as a cow's horns are. Yet annually they shed them, and they are the only known animal that sheds a true horn. The antlers of deer and moose and elk are quite different. These weapons are not built over a core of bone. They are solid, and when they are shed, they break off at the "burr" close to the head. With the pronghorn the process is different. The horn detaches itself from the bone within it, and for a time the antelope goes about with the bony cores exposed, before the new horns begin to form. No other antelope sheds its horns, and no other bone-cored horn has a branch, or "prong."

a branch, or "prong."

They are graceful creatures, and it is extraordinary how quickly a danger signal can be relayed by them for miles. Their rumps are covered with

long, white hair which can be erected. When the pronghorn is contented, this hair lies normally, but at the least sign of trouble it rises, until it forms two large "rosettes." With this change, the hair shows brilliantly white — so white, in fact, that at a distance of half a mile or more when the sun is on them, it reflects with almost the brilliance of a mirror. The pronghorn's eyesight is good too, and the result is that if one pronghorn is startled and shows his "flag", others see it, even at great distances. Furthermore, these others almost invariably take the same sign up, so that within hardly more than a few seconds, if the country is open, your presence is given away to every one of the graceful creatures within miles.

But of all the game in all the world, mountain sheep and mountain goats are the prize trophies. Lions and elephants, moose and elk, tigers and hundreds of others are often brought down by inexperienced hunters. But rarely indeed is a Rocky Mountain sheep, or a Rocky Mountain goat ever procured, save by an experienced hunter, and even he has his hands more than full at the task.

Of the two the goat is, perhaps, less difficult. The chief difficulty with which one is faced in getting a goat is the nature of the country in which he lives. I have seen the creatures on cliffs so precipitous that one wondered how on earth any beast could manage to cling to the rocks, and at a guess I should say that fully half the goats that are shot fall from their tiny footholds into

gullies from which they cannot be taken, or in which they break their horns or crush themselves.

From this fact has grown up the belief that they often deliberately leap to their deaths when they are hit. That is anything but likely. Any animal tends to try to save its life, even when it is wounded, but it is not unlikely that the reflex action of the muscles, when the animal is struck, is such as to make it lose its precarious footing and pitch out headlong from the cliff on which it stands. I have seen other animals leap into the air when they have been struck. The difference lies in the fact that when the goat leaps up so unpremeditatedly, he is unable to regain his footing.

To hunt these creatures, one has need to be a mountain climber, for they love to dwell among the crags, and in order to get them, it is necessary to climb high among the peaks. They tend to make their way upward when any danger presents itself, and so long as the hunter is below them, the chances are all with the goat. Once the hunter has been able to reach some ridge or other, however, from which he can see the animals at lower levels, they are somewhat less difficult to get, for in common with most mountain animals, they look for danger from below, and rarely seem to expect it from above. The reason for this is obvious. Their natural enemies all live in the lower levels, and the natural method of attack is from below. Man, however, being a highly unnatural

creature at best, is able to do what no other enemy ever does, and the result is that the goats sometimes fall before his attack.

Mountain sheep, on the other hand, are more clever. They too, dwell among the mountains, but they are far more clever in defeating the hunter's best efforts. I once made out a small herd of them in the Alberta Mountains, and set about getting near enough for a shot. I was in plain sight when first I saw them, but they were a mile away, and I was certain they had not seen me. The result was that I circled about in order to get on the ridge just above where they were feeding, and finally I made it. I crawled carefully up to the top and peered over, fully expecting to see them within a couple of hundred yards, but they were not there. I raised myself higher, thinking that they certainly had not moved far, but the mountain side was absolutely deserted. I took out my glasses and searched about, and then I saw them — a good two miles away, feeding up the next mountain side.

This time I decided to be more careful, and so I lay hidden until they fed slowly over the next ridge; once they were out of sight, I picked up my gun and scurried after them. Down I went and across the valley, and up the other side. It was a hard climb, but I was in good shape, and I made it in surprisingly short time. As I neared the ridge, I slowed up and caught my breath. Then I raised myself carefully in the hope of finding them

near by, but once again the mountain side was bare, and then, through my glasses, I saw them on the next ridge, as far off as before, feeding slowly up the slope as if nothing in the world were farther from their minds than a hunter on their trail. Again I tried it, and again they were on the next ridge when I reached the top, and at last I turned about and made my weary way back to camp, without having gotten within a mile of the creatures in all my stalking.

They are clever at that game, and their eyesight is remarkable. Furthermore, they are very, very canny. Did they stand up and look startled when first they saw me? Not at all. They kept on feeding, and watched me merely out of the corners of their eyes, but the moment I disappeared, they beat a very hasty retreat. Down the mountain side they galloped, and for a little way up the opposite slope. There, knowing that they had put a goodly distance between themselves and me, they stopped and started feeding, keeping one eye out for me when I should appear over the ridge that they had deserted. Realizing that so long as they kept on that slope they would be able to see me, they took their time in reaching the top. But once they had passed from sight, and I had begun my laborious and hurried crossing of the valley, they were doing exactly the same thing in the next valley — but with far more ease — with the result that once I reached the next ridge our relative positions were unchanged.

Since that hunt I have studied the animals and have gotten several specimens, but it was not until I learned that trick of theirs that I began to make any headway against them.

The game of America is sadly depleted, and only by the very best methods of conservation will it be possible for our animals to hold their own. It would be unfortunate indeed if we should do what we started out so energetically to do, and exterminate the wonderful creatures which formerly roamed here in such numbers. Even as I write the State of Wyoming is engaged in a brutal and ridiculous campaign of extermination. For the ridiculous reason that they need a few paltry dollars which they are not considerate enough to raise by taxes, the State is selling licenses for pronghorned antelope at fifty dollars the license, and by that method will raise twenty-five thousand dollars by permitting the slaughter of five hundred of these peculiarly American animals. And as every one knows, five hundred antelope killed means that many others will be wounded, some of which will die from their wounds. Too few of those graceful creatures are left for such thoughtless methods, and we may wake up before long to a realization of the fact that the pronghorn is extinct, just as South Africa now realizes that the formerly enormous herds of quaggas are gone. How easy it is to exterminate, and how utterly impossible it is to bring them back to life.

We learned all too late to save the buffaloes in

TRAILS OF THE HUNTED

their wild state, but luckily a careful guard was put over the very few left in captivity and now those few, thanks to the American Bison Society, are a little more than holding their own. Let us hope that that lesson will sink in, and that we will learn, before it is too late, to conserve at least those animals that are typical of America.

CHAPTER XI

CENTRAL ASIA

ONE requires a surprising amount of definite information in order properly to prepare an animal group for presentation in a museum. Individual animals may be mounted without backgrounds accurately picturing their natural surroundings, but the best museum methods nowadays require far more than a well-mounted animal. In order to give the public some real conception of a certain species, several specimens must be collected. An old male, an old female and the young often serve the purpose, but sometimes - particularly if the animals tend to live in packs or herds - more specimens are essential. In addition, then, to those I have named, a young full-grown male is often desirable, a female of about the same age is needed, and still other specimens must sometimes be collected for the group, if real truth is to be preserved.

These animals must be mounted in naturalistic and artistic groupings — their postures typical. Then comes the very important task of constructing a background in order to show the country in which the animals live; in order to show the types of vegetation with which they are likely to be surrounded in real life; in order to show every-

thing that will tend really to recreate the actual conditions under which such animals are found or

might be found.

All this means that very careful and accurate studies of trees, grasses, bushes, ferns, et cetera, must be made in the field. Actual specimens of all these are generally brought to the museum from whatever land is to be represented. The major portion of a tree may be taken up bodily or may be cut into sections for easy transportation. Innumerable photographs are taken. Pencil sketches and complete notes are made. Often artists are sent into the district in order to paint actual scenes to be used behind the carefully reconstructed foregrounds upon which the mounted animals are to be placed.

If one can imagine the infinite amount of work that would be required in the actual reconstruction—in wax and celluloid and other mediums—of a section of heavy forest twenty feet square, he may be able to get some idea of the work required of those who prepare the great groups now becoming more and more common in our best museums. Every leaf must be accurate in size and shape and coloring. Every tuft of grass must duplicate real life to the satisfaction of a botanist. The very color of the imitation soil we make must be correct, and outcroppings of stone must satisfy the particular eye of the geologist. The insects that are used as a part of the scene must be the insects that would be found in just that place on just that

continent. The vines — the mosses — the birds — all must be as accurate as is possible. Everything about the group must be an actual reconstruction of Nature.

In the midst of this setting the animals that are the major objects of interest in that particular group must be mounted, and behind the whole there must be a painting that merges into the foreground in the most convincing possible manner. Furthermore, these backgrounds, as I have said, must often be actual scenes — not figments of an artist's imagination.

The collections of such an institution as the American Museum of Natural History come from every corner of the earth. In any given hour I may be called upon to deal with matters relating to any of the six continents, to the Arctic and the Antarctic, and to the oceans themselves. Naturally many experts must be called upon for information on these widely scattered subjects. But the more information we who actually do the work can have, the better our work will be performed.

It will never be my good fortune, of course, to visit all the portions of the earth from which our specimens come, but now and then some district seems particularly to call for a visit, in order that I may better visualize the region before attempting to plan its reconstruction for the Museum exhibits.

Asia was one of these districts because of Roy

Chapman Andrews' work there, and for several years I had hoped some day to cross the mountain wall that separates India from the rest of Asia, in order to get some idea of the appearance of that difficult and distant land. Ovis poli, those beautiful spiral-horned sheep of the Pamirs, also intrigued me. There are few experienced hunters who do not view sheep as the last word in trophies, and few indeed fail to give Ovis poli the preëminent place among the sheep of the world. Furthermore, the American Museum had none of them.

But though I had long held all this vaguely in mind, I had seen no opportunity to make such a journey, and considered it merely as a sort of air castle that I would like to see materialize. Then, quite unexpectedly, late in 1925, I received a letter from William J. Morden, of Chicago, suggesting such a journey and asking me to accompany him. Delays and difficulties covered several months, but finally everything was arranged, and early in 1926 we set out to cross what is, perhaps, one of the most difficult lands on the face of the earth, and one where distances as we know them seem something very limited indeed.

It was as a result of Bill Morden's suggestion that the Morden-Clark Asiatic Expedition of the American Museum of Natural History was organized, for the purpose of entering the Pamirs in order to obtain specimens of *Ovis poli*, in order to penetrate to the Thian Shan, in Chinese Turkestan, for ibex, and in order finally to meet Roy

Chapman Andrews at the tiny town of Hami, near the border of Outer Mongolia, so that we might return across that desert land to Peking with a scientist who knows that portion of the world very well indeed.

The distance we had set ourselves to traverse from India to Hami - was something over three thousand miles. It was our plan to make that on foot, on horseback, on yaks and camels, and in carts, depending upon which of these means of native transportation was the most feasible in whatever section we were traveling. As a matter of fact, we used all these methods and one or two more, and the distance we actually traveled from India to Peking was eight thousand miles, three thousand and four hundred of which lay through a land where automobiles are unknown, and to which railroads have never penetrated. Because of an adventure that very nearly ended in the death of both Bill Morden and myself, we were forced, after having completed most of our programme, to change our route and do something that certainly had not been a part of our original inten-tion. Furthermore, we had planned to be in the interior of Asia for about five months. It actually took us nine to get from the Vale of Kashmir, which was our starting point, to Peking, where our crossing of Asia actually ended.

Bill Morden has ably told the detailed story of the journey in his book "Across Asia's Snows and Deserts", and it is no part of my purpose to retell more than seems useful in explaining the work required when one is endeavoring to obtain the information that museums have taught themselves to collect.

As every one knows, India is bounded on the north by the greatest mountain wall in the world. Valleys in which we hunted Ovis poli are as high as the very summit of Pike's Peak. Vast districts never drop below twelve thousand feet, and the mountains are precipitous to a degree rarely seen in North America. Glaciers are there by hundreds. Deserts are the rule, and the sections where vegetation abounds are rarely more than large oases. Roads are sometimes less than trails. Trails are sometimes untraceable save by local native guides, and more than once even such men led us astray. It is a harsh, forbidding land, and we had set ourselves the task of making a journey across it equivalent in length to the distance from Detroit to London. What we actually did was to make a journey in Asia alone, by roads and trails, when they were traceable, without them when they did not seem to exist, and finally by railroad from the very center of Siberia to China, roughly equal to one third of the circumference of the earth.

It was our desire to reach the range of Ovis polis before those wonderful sheep had shed their winter coats. This necessitated a start from Kashmir before the passes were open for the summer season. It would be difficult, we knew, but Morden had gone to the utmost trouble to obtain the various

passports and permits from the British, the Chinese, and the Russian governments, and once we had arrived at the quaint old city of Srinagar, which lies in the Vale of Kashmir beside the Jhelum River, we hurried our preparations, and made ready for our departure.

We had permission from the Indian Government to cross the Burzil Pass and to traverse the route that leads through Gilgit and Hunza - permission that made it possible, barring accidents, to get into the Pamirs in time to obtain the sheep we wanted before their winter coats had disappeared. Morden had a theory that these poli were not the rare and almost extinct animals that they were said to be. He had hunted in Kashmir and near-by districts, and while there had obtained all the information he could get concerning poli. He found that the stories concerning them that came to him invariably originated in one district - the Tagdumbash Pamir, which lies in Chinese Turkestan. There, undoubtedly, poli were scarce. But in the Russian Pamirs, he felt certain, they would be more numerous. No outside scientific expedition had entered that district in many years, however, and there was no way in which to check up in advance on the theory that he had originated. But now, thanks to a letter that Morden had obtained from Senator William E. Borah, we had been able to get the Russian authorities at Moscow to give us permission to hunt in that remote and highly restricted military territory.

Thus prepared, we got together our equipment at Srinagar, and with the generous assistance of the British authorities there and along the route, we began our journey. From Srinagar we drifted down the Jhelum River with our boxes and bales loaded on a native boat, and the next day, at the little town of Bandipur, we gathered together the sixty coolies that we required, and on the following morning began our march.

Immediately to the north of the town of Bandi-pur lies that enormous wall of the Himalaya, across which, at the season of the year at which we were forced to start, no transport animal could possibly make its way. On foot, then, we were forced to travel, with our sixty coolies strung out along the steep trail, weighted down with their sixty-pound loads — struggling up and up from the beauties of the Kashmir spring to the frozen

the beauties of the Kashmir spring to the frozen grandeur of the Himalayan snows.

For twenty-seven days we struggled over and among the tremendous mountains that were our first great difficulty. Over passes through which no previous traveler that year had broken a way, through valleys where the few natives struggle constantly against the fear of starvation, along mountain torrents that race through their shallow canyons we made our way, over trails that sometimes had slipped away from the precipitous mountain sides into the angular valleys below. Over the Burzil Pass we climbed, struggling with our office-softened muscles to overcome the



THE COOLIES OF THE MORDEN-CLARK EXPEDITION ASCENDING THE VALLEY TOWARD
THE BURZIL PASS IN THE HIMALAYAS



AMONG THE HIGH PEAKS ON MINTAKA PASS, THE DIVIDING LINE BETWEEN CENTRAL ASIA AND NORTHERN INDIA

difficulties of the trail and with our low-country lungs to obtain enough oxygen from the rarefied air to enable us to put one foot before the other. Now and then we obtained horses for a little of the way. Now and then we rode on yaks. Every day or so we obtained new coolies, in order that the ones who had been helping us along our way might return to their unyielding garden patches in their constant struggle to obtain a living from the rocky soil.

Other passes and gorges and rocky valleys were overcome in their turn, and finally we reached the border of the Russian Pamirs, and camped below Peyik Pass while we sent natives over the border with our permits in order to assure ourselves of a safe reception from the Soviet soldiers of Kizil Rabat Post. That our papers were in order we knew, but we did not know positively that the frontier guards had been notified of our coming. Until we were assured that our welcome would be sympathetic we had no desire to risk our guns and cameras and scientific equipment, or, as a matter of fact, to risk anything at all in entering Pamira, as the Russian portion of the Pamirs is called.

Word came, however, that we might enter, and we wended our way high over the saddle that is Peyik Pass, and made our way down the farther side of the mountains where we were met by a smart detachment of troops that had been sent to greet us. The month that followed was one filled with fearfully hard work, for sheep are difficult animals to get at best, and at the altitude at which we were hunting the *poli*, our lungs seemed always to be called upon for more work than they could well perform.

It was Marco Polo who first reported the remarkable sheep of that portion of Asia, when, seven hundred years ago, he returned from his amazing journey to China. It was he, too, who called the Pamirs "the roof of the world" — a phrase that is so appropriate that no one has improved on it since. The district is, in reality, an enormously high plateau, intersected by ridges that reach to fifteen or eighteen thousand feet. So high, however, are the valleys that lie between these ridges that one is rarely conscious of the great altitude of the peaks, which here are not particularly precipitous, and rarely rise more than six or seven thousand feet above the lowest sections. One is ordinarily conscious only of vast, bare sections, devoid of trees and bush — for the whole land is above the timber line — and of a sensation of enormous space.

In such a land, where there is no cover — where trees and bushes are entirely absent, and there are not a great many outcropping ledges behind which one may conceal oneself — it is anything but an easy task to hunt such clever and clear-eyed creatures as *Ovis poli*. Only by climbing to the peaks before dawn, by watching from some point of vantage with a telescope, and then by patiently

attempting to stalk the wary creatures, was success possible at all. Many times we saw desirable specimens within reasonable distances, only to find it impossible to approach to within range, owing to the fact that there was no cover behind which we might advance.

One thing, however, we did learn. It was obvious that poli are not the rare and almost extinct animals that they have been said to be. In that month we spent hunting them in the high Pamirs, we saw more than a thousand six hundred of the animals, not counting those reported by our guides and not actually seen by ourselves. Furthermore, in that figure the most generous allowance was made for duplication. Every day we made notes of the numbers seen, and we moved our camps frequently. But though we spent a month there we saw only a very small portion of the total range in which the animals are known to live. It is obvious, therefore, that Morden's theory was sound, and as a result of our observations the theory has been proved to be a fact.

Every day we climbed panting up the grades, and lay out on the rocks, watching the mountain sides and valleys through our telescopes, suffering more than a little from the cold, for much of our hunting was done in the snow — examining band after band in order to locate the specimens we desired, for our purpose was not merely to shoot poli. It was, instead, to bring back a typical series from which a careful scientific study might be made.

We were in virgin territory, and were treated most considerately by the local officials, and even by the native Kirghiz. Never was one given a better opportunity to study *Ovis poli*, and we were able not only to secure the specimens we desired, but also to make the first motion pictures of *poli* ever made. The results were all very valuable, and we were more than pleased at the outcome of this first phase of our journey.

We had constantly to bear in mind, however, that before us lay more than a thousand miles of difficult country that we had to cross in three months. In that time, too, we had to spend several weeks hunting ibex and other game along the way. We had definitely agreed to meet Roy Chapman Andrews at Hami, near the borders of Outer Mongolia, on September first. On the way we had to traverse Kashgaria, to hunt in the Thian Shan, and to cross Dzungaria. It meant that we had little time to spare. We were optimistic, however, for our major scientific task had been completed in the two months that we had already spent, and we could now begin our journey to the north and east.

It took us a week to travel the one hundred and fifty miles from the borders of Pamira to the city of Kashgar, which lies in the western portion of Chinese Turkestan, and from that point we sent our *poli* specimens back to Srinagar with three Kashmiri natives whom we had brought with us for the purpose. There, too, we received word



CLIMBING THE HIGH PEAKS OF THE RUSSIAN PAMIRS



SOLDIERS OF THE SOVIETS NEAR THE FRONTIER
OF THE RUSSIAN PAMIRS

from Andrews that the civil war in China absolutely precluded his getting into the field with his expedition in order to meet us as we had hoped he could. The difficulty that had stopped him was one that we had known might arise. Still we were disappointed, for we were now in the very heart of Central Asia, and could depend upon no one but ourselves to get out. We still had to push on to the "Celestial Mountains" - the Thian Shan — for our ibex hunt, but what to do when that was accomplished was something to be decided. Should we push on and attempt without Andrews' assistance to make the difficult crossing of Outer and Inner Mongolia? Should we enter that land which neither of us knew, and concerning the difficulties of which we had the most hearty respect? Or should we turn about. once our ibex hunt was completed, in order to return the way we had come?

Only the preceding year Theodore and Kermit Roosevelt had entered the poli and ibex country, more or less as we were doing now. They had not penetrated into the Russian Pamirs, it is true, but aside from that they had done very much what we were doing. It seemed like a mere duplication of effort to make a journey similar to theirs, for even though they had represented the Field Museum of Chicago, while we were from the American Museum, the scientific results were similar. But we had planned to make the crossing of Asia. Should we now permit the civil war in

China to stop us as it had stopped Andrews, when by traveling east from the Thian Shan we could traverse territory that had never before been visited by an American museum expedition?

We knew that many difficulties lay along that route, but after a great deal of very careful study and thought, we decided to take the risks that we knew lay there, and make an effort that would certainly be productive of some very valuable results if we were successful. Thus it was that we made ready at Kashgar, and pushed on to the Thian Shan, in order to spend what time was required in hunting ibex before traveling on through Dzungaria to Mongolia and the Gobi Desert, in the hope of crossing that barren land before winter should come down upon us and add its handicaps to those that already lay across our route.

It took us ten days in Kashgar to determine upon our plans, and to outfit for our journey to the Thian Shan, but finally, with our equipment loaded in huge, ungainly carts, and with ourselves mounted on wiry little ponies that we had purchased, we began our march. Along the narrow, crowded streets we made our way, through the heavy gate, and on to the plains. Chinese and Chantos stared at us as we passed. The awkward carts creaked along the rough way. Curious and watchful eyes were fixed on us from the stalls of the bazaar as we passed. Dogs barked and snarled at our horses' heels. Donkeys stubbornly refused to turn out as we advanced, while reeking odors and strange costumes, mud houses and occasional

protesting camels all told us that we were in a land extraordinarily different from anything that we had known before.

Day after day we jogged along the almost hopeless roads. Day after day we withstood the heat of noon, the almost daily "buran", or dust storm, and the dirt and odors of the serais at which we stopped for the night. We slept in dirty, evilsmelling rooms, when they were not too bad, and when we could stand them no longer we rolled up in our blankets on the ground near our horses. We almost grew accustomed to being stared at as we ate and wrote and talked and worked. We grew to measure days by miles. The vast extent of Asia was beginning to make itself felt. Somewhere far to the east lay Peking and the sea, yet so vast did the distance seem to us as we made our snail-like way along that we sometimes wondered whether or not we would ever manage to pull through.

After thirty days of almost steady travel through the heat and sun and dust of the plains, and among the rocks and gullies of the foothills of the Thian Shan, we finally began the heart breaking task of hunting ibex over the crags and rocks and precipices of that impressive land. With good fortune we thought that we might collect the specimens we needed, prepare our notes, salt the skins, clean the skeletons, and be on our way again by the end of the first week in August — about three weeks, or four at most. Actually we spent two solid months roaming valleys, struggling up steep ridges, lying out on windy, rainy elevations,

searching with our glasses for the wary ibex, and staying out well into the night, occasionally, when we got too far from camp. Through valley after valley we searched, getting an occasional specimen, turning our attention, now and then, to roe deer and stag, but always coming back to the extremely difficult game that had lured us thither.

No comparatively smooth slopes greeted us as had been the case in the Pamirs. Now we struggled among precipices and peaks, vast valleys and enormous mountains. To make one's way from one valley to another often required a whole day. To climb to the sharp apex of a ridge was sometimes to risk spending the night in the open. Beautiful views were visible from every point of vantage. Fog-filled valleys stopped our hunting and left us marooned on peaks rising like islands from the sea of clouds. Snowstorms and hail alternated with rain, while now and again the sun broke through to illuminate one of the most beautiful mountain districts it has ever been my privilege to see.

Yet through it all our collection was slowly growing. Our notes were packed with information concerning the habits of the ibex. Sketches and photographs, motion pictures and actual specimens finally were gathered together, and on the twenty-first of September, we entered the city of Karashar in order to begin our march of two thousand miles across the plains of Dzungaria and the deserts of Mongolia, to the city of Peking.

CHAPTER XII

YAKS, IBEX, POLI

THE first Asiatic animal with which I became intimately acquainted on its native heath was Pegasus - the yak I rode in the Pamirs. I named him Pegasus because he was so different from the mythical Pegasus as constantly to remind me of that beautiful creature - by contrast. My Pegasus was stocky and heavy. He was long-haired and hump-shouldered. He could no more have taken flights of fancy than he could have taken those other flights for which the original Pegasus was famed. He was willing when he was willing, but when he was n't he outclassed any Missouri mule in stubbornness. At such times one could pull on his nose rope until his nostrils were stretched out to an unbelievable degree, without making the least impression upon his determination. His nose fascinated me, and though I was never willing to have him balk, I was always deeply interested when it happened, for I never was able to reach a conclusion concerning the length to which the end of his nose might be stretched. When an energetic native got on one end of that nose rope, and Pegasus was in the mood for a determined tug of war, the creature's nostrils stretched exactly as if they were made of

rubber. And they looked like rubber too. Sometimes I almost wondered if they were n't rubber.

It is true that Pegasus — my Pegasus — was not the swiftest of animals. When he was going at his best cross-country gait, which was a sort of trot with his front legs and a kind of amble with his hind ones, he could cover about four — possibly five — miles an hour, though his tongue hung out and he panted like a dog when he did it. But I took no particular exception to that, for we were at very high elevations, and four or five miles an hour is as much beyond my powers at an elevation of fourteen thousand feet as the speed of the original Pegasus was beyond that of my shaggy and stoop-shouldered mount.

It is true that one was called upon for considerable physical effort to get him to keep that pace. It was necessary to arm one's self with a light club, and to thwack Pegasus on the rump almost constantly. He did not seem to mind the oftrepeated blows in the least, but only when they were being applied would he continue his efforts. Then, occasionally, when we were climbing some particularly abrupt slope, he would gradually slow down, despite the blows, until an especially hard thwack would cause him to make the most extraordinary sound some place in his interior—a kind of gulp which seemed intermingled with the sound of his constantly grinding teeth. I soon learned that in some strange sort of way he was changing gears—getting into intermediate,

or something of the kind — for immediately following the sound, he would invariably speed up and continue at a better pace.

Occasionally, however, when he was being belabored more than suited his fancy, the sound resulted in his changing into reverse, and he would immediately start backing down the slope at hairraising speed. Once he backed down until his hind feet slipped over the edge of a perfectly perpendicular gorge fifty or seventy-five feet deep. I tried to stop him, but I saw that I could n't, so I slipped off his back, seized his nose rope in both hands, braced my feet on a rock, and pulled for all I was worth. His hind feet were actually over the edge when he stopped, but whether my pulling or his own good sense stopped him there I cannot say. All my equipment, including my gun, was on the saddle and I feared a total loss if the rope broke or pulled out of his nose, and by no means could I release the rope in order to save my belongings.

It was startling, at first, to get into the saddle that was placed, perforce, behind the high shoulder hump, for sometimes the animal carried his head so low that it could not be seen at all by the rider. He seemed, when his head was down, merely to end with his hump, and when the going was particularly rough, or when some abrupt and very deep gorge lay immediately below the narrow, rocky trail, that absence of a head was disconcerting. But at times he carried his

head up, and then his horns resembled nothing so much as the handlebars of a bicycle. I even tried to grasp them and steer him as I might have steered a bicycle, but the experiment was not a success. Pegasus objected.

Yaks are interesting creatures. They much prefer eating snow to drinking water. They are goatlike in their sure-footedness. They will perform the most amazing feats, and will struggle successfully over sections of trail that would be a test for a mountaineer. They can go without food for days, and can live on stuff that any self-respecting cow would pass up as hopeless. But when they balk, nothing whatever can be done with them. On one occasion Pegasus balked when we were on the trail, and we pulled his nose out fully six inches in our attempts to make him budge. We spoke unkindly to him. We pounded him and pushed him — all to no purpose whatever. I got the impression that he had no feelings at all — mental or physical — for no matter what we said or did to him he failed to make the least move.

At times we would have to push our mounts very hard in order to come up to our quarry before they had a chance to move out of sight. This would tax the yaks to their capacity and I once saw one suddenly and completely stop. He had made up his mind that he had had enough, and nothing could persuade him to move. Every method was used without effect, so the guide,



DIFFICULT CROSSING ENCOUNTERED WHEN DESCENDING THE NORTHERN SLOPES OF THE HIMALAYAS



MR. CLARK ON HIS HUNTING YAK "PEGASUS" AT 15,000 FEET IN THE RUSSIAN PAMIRS

evidently knowing his animal, waved his hand as a sign that he would continue on foot and leave the yak where he was.

So we went away and left him. We continued our hunt for three days, and still he remained there on the rocky slope. We rose on the third morning, and then one of the men went and got him, for he seemed to have forgotten his determination by that time. His balking spell was over, and he followed the man mildly into camp. But he had remained exactly where we had left him. Plenty of signs showed that he had not moved more than ten or twelve feet in all that time.

I was on Pegasus — when I was n't on foot — during most of the time we hunted in the Pamirs. I anchored him to rocks for hours at a time while we climbed to the ridges in our efforts to find just the specimens that would be most useful to the Museum. And I must say that yak never seemed to mind being left to himself on an exposed mountain slope. Either he had some very interesting thoughts of his own with which to entertain himself in our absence, or he had no thoughts at all, for he never seemed to get upset at his long waits, and his equanimity under such circumstances was most commendable.

But while he was waiting, I was climbing about or lying out on exposed and uncomfortable points, trying to locate the *poli*, and then trying to outwit them or to outwait them. The work was

interesting, it is true, but it was also difficult, tiring, cold, and often unprofitable. Whether or not Pegasus understood all this and congratulated himself on being able to escape from it I cannot say, but certainly he was never averse to grinding his teeth contentedly over his cud for hours at a time, while I was off on business on which he could be of little help.

An account of a poli hunt is not likely to be the most fascinating hunting story in the world. The beasts themselves are not dangerous. The only dangers that might arise in hunting them are those that might result from a misstep along the edge of a rocky crag or from being lost in a snowstorm. As for the rest of it, it was merely a case of watch, wait, and follow. The task of poli hunting was very similar to the task of hunting big-horn sheep in the Rocky Mountains, with the additional difficulties that the great elevation added. One's shortness of breath was an ever-present handicap. The utter absence of trees and bushes was another, for it made stalking doubly difficult. And the animals were the very personification of cleverness.

One cold morning, Jonkhol, my Kirghiz guide, and I arose while it was still dark, and began our climb to a ridge overlooking a spot where a promising herd of *poli* had been seen the night before. We struggled up the rocky slope in darkness, stumbling, risking our necks, and panting until we reached the crest. There we found some shel-

tering rocks as the first gray signs of dawn appeared in the east, and with our telescope resting on the rocks we sat down to wait until the light should make it possible for us to locate the animals we were after. Slowly the cold, early morning light broke over that extraordinary country, lighting up the sea of peaks and throwing the valleys into heavy shadow. Then, gradually, the light crept down the slopes, and we located the herd for which we were looking as they casually made their way up the slope to a point on the crest half a mile or so from us. It took them two or three hours to get there, for they were undisturbed and they were contentedly feeding on the sparse and tiny tufts of grass to be found among the rocks. It was only when the sun was well up that we dared risk a move, for only then had they reached a point that made it possible for us to stalk them.

They had done what is not uncommon for them. So far as I could see, three of them had posted themselves as sentinels. One looked each way from the crest of the ridge. One stood on a rock from which he had a clear sight of everything that lay in the direction away from us. The others, so far as I could tell, lay down to rest. Our luck was with us — so I thought — for apparently they had posted no sentinel to watch the section of the crest on which we were hidden.

Carefully we crept forward, keeping well hidden behind a row of rocks that lay conveniently along the route we wished to take. For an hour we made our way along, careful not to make a sound, careful to test the wind from time to time to see that it was not carrying our scent to the watchful creatures. And at last we had come to within a hundred and fifty yards of them. It was time for us to raise our heads and see if we could not get one.

I crept up a sloping rock and carefully raised my head. There they stood, just as they had been standing when we had begun our stalk. One stared straight out over the valley to the east. Another stood boldly outlined, a hundred and fifty yards away, staring into the valley to the west. The third was standing on his rock staring directly away from us. I drew myself up a little farther and started to raise my gun, when my heart jumped into my throat, for there, not sevneart jumped into my throat, for there, not seventy-five yards from me, was a handsome sentinel that I had not seen before. He was partly hidden by a huge rock, and now I found myself staring directly into his keen eyes. I tried to get my gun up in time, for he was a beautiful animal, with a perfect pair of horns that must have been as large as any we saw, but I was too slow. What signal he gave I cannot tell, but there was sudden movement on the part of sentingly and contract allies and ment on the part of sentinels and grazers alike, and as I let go a hopeless shot they all disappeared at a furious gallop, diagonally down the slope away from us. Rocks rattled and slithered down the slope, and when I had risen to my feet and gained

an elevation from which I could see them again, they were half a mile away, still running furiously. Nor did they stop until they had put a good two miles behind them, and were halfway up the slope on the opposite side of the valley.

To get near that herd again that day I knew was hopeless, so I turned my attention to another bunch that Jonkhul had picked up in the distance. We made a fairly rapid advance, which brought us to within a quarter of a mile of where they had been, and then peered over a ridge in order to see what had become of them. They had been in a depression, but now I saw them moving up a slope the better part of a mile away. Somehow they had gotten our wind, I supposed, or had suspected our presence, and were moving away. It seemed to me that to continue the stalk was hopeless, so we decided to make our way back to camp. The easiest way was through the depression in which the herd had been, so we headed for it. An intervening ridge hid the bottom of the depression from us, and we could not see into it until we were at its very edge. We blundered carelessly ahead, and looked down the slope, expecting to see nothing at all, but to our amazement, there was the band that we had so patiently been stalking. It had not moved. We had, instead, seen another band that we had not located before, and had taken it for granted that the creatures had made their escape. We were n't a hundred yards away, but in the excitement that followed, all I could do was to let go four or five shots, which splattered harmlessly on the rocks behind the rapidly retreating sheep, while they made the best of their way out of the depression, and up a rocky slope at such speed that it was hopeless to attempt to follow.

Such experiences as these were commonplace. More often, however, the sheep we tried for made their escape while we were much farther away, and the cleverness with which they would feed slowly up a slope while we watched them from some opposite ridge, only to move rapidly down the farther side of their mountain once they had passed from sight, was something that gave us a great deal of unproductive labor in following them. At such times we almost invariably found them on a still more distant slope by the time we had puffed and panted our way down a hillside and up to the top of the slope on which they had been feeding.

Occasionally we outwitted them, and we did manage to collect an excellent series, but ordinarily they were very hard indeed to approach. One morning we saw, from camp, a fine band feeding on a ridge that thrust itself out at the intersection of two valleys. It was impossible for us to approach them without remaining in the open for half or three quarters of a mile at least, and we thought that we could not make such a stalk. While Morden and I were talking the matter over, we noticed that a herd of domestic

yaks was feeding in the valley between us and the poli we wanted, and finally we determined to take our own yaks, and walk beside them, keeping the animals between ourselves and the sheep, until we could come among the scattered yaks in the valley. The yaks, fortunately, were slowly feeding in the general direction of the poli, and it seemed to us that, with care and patience, we might be able to pass up the valley to a point where we might begin our actual stalk from behind a ridge of rocks that lay beyond the sheep.

Very carefully we began the attempt. The sheep paid little enough attention to the yaks ahead of us, and we managed, ultimately, to get among the animals, and then to go along with them as they advanced up the valley. After a couple of hours of patient maneuvering we were able to reach the point at which we dared leave the yaks, but during almost all that time we were in plain sight of the poli, none of which seemed to see us at all. Occasionally one of them would raise his head and stare in our direction, but they seemed unable to pick us out from among the yaks which only partly obscured us. When we finally were able to leave our slow-witted friends, we managed to creep up behind the ledge of rocks to within short range. I peered over with my glasses, trying to pick which sheep I wanted, and had chosen one, when one of our Kirghiz guides carelessly moved his head, as he, too, peered over. Instantly the herd was in flight. Both Morden and I let go

with two or three shots, only to miss, and our three hours of work and our successful stalk were thrown away, while a specimen that would have helped enormously went galloping over a rock slide and disappeared on the farther side of the ridge.

After we had spent a month in the Pamirs, and had collected a series that would serve the purposes of the Museum to excellent advantage, we began to make our plans for continuing on our way. We could not resist the temptation of one last hunt, however, especially as we wanted another female. The result was that Morden and I separated, and with Jonkhul I went over a ridge that rose above our camp. Having reached its crest we made out a band of poli on the next ridge, well over a mile away, and we began a stalk that took us an hour or more and finally brought us to a point beyond which we dared not go. So far we had not been detected, but there was no way at all for us to advance another ten feet without appearing in plain sight. We were checkmated, as we had been often enough during the preceding weeks, and so we lay there, behind a ridge of rocks, wondering what we might do next.

As we were wondering, we caught sight of another band of sheep on the point of the ridge from which we had come. They were about two miles away, and it was not until we had studied them for over an hour with binoculars and with our telescope that I decided that at least one of them



A KASHMIRI GUIDE WITH A FINE IBEX SHOT BY MR. MORDEN



THE AUTHOR AND A FINE POLI RAM

had a very exceptional pair of horns. We had come for females, of course, but we were unable to approach the only band of females we had seen, and there, across the valley, was a big male that appeared to be at least as large and fine a specimen as any we had so far obtained. It did not take me long to decide that I was going after him, although I realized that the stalk would be a long one, and it might not be successful.

We started, however, and made our way along under cover of the rocks as far as we could, and then, having reached the valley, we were forced to cross it in plain sight of our quarry. Under the circumstances there was only one thing to do. To make our way in the direction of the sheep would be futile, for once they saw us coming they would scurry out of sight, and be lost to us for good. But if we should make our way across the valley in such a direction as to appear to be traveling away from the sheep, the chances were that they would not be frightened into running away, although they might take to feeding off in the opposite direction.

From where we left the shelter of the rocks, the sheep were diagonally across and down the valley, so we made our way diagonally across and up the valley, as if *poli* were the farthest things from our minds. For nearly half a mile we were in sight, but the sheep did not run; then, having found cover again, we began a stalk that needed to be hurried, for the crafty creatures might move

away immediately we dropped from sight. We crept among the rocks, running across depressions, creeping up to ledges, sliding on our bellies now and then, crawling on hands and knees — making our way as rapidly as we could without showing ourselves.

For an hour we advanced, and finally approached the crest of a ridge beyond which we expected the poli to be. Carefully we crept up until we could peer over. Slowly and cautiously we raised our heads, and found that the sheep, as we thought they might, were feeding slowly away. Already they had moved for some distance, and were approaching another ridge. We waited patiently for them to cross it, and when they had passed from sight, we hurried forward once again. We crept carefully up to the crest that they had passed. We raised our heads — and there, hardly a hundred yards away, stood the big fellow whose horns I had examined through the telescope at a distance of two miles. I raised my gun carefully and fired. That he was hit was obvious, for he staggered, but away over a wide rock slide he went, with the others, as if nothing whatever were wrong. My heart sank within me, for the way he ran suggested that he could go on forever. Off across the rocks the whole band sped, with my big fellow bounding gracefully with them. I paused and raised my glasses, and realized, then, that the one I had hit was dropping very slowly behind the others. At that I decided to wait. If we should

chase him, his nervous energy might make it possible for him to keep up that pace for miles. If we should let him alone, he probably would stop for rest, and once having stopped, he would probably remain where he was until he was disturbed again. In that time his wound would tell and I could get him.

For half an hour we waited, and then took up the trail again. We saw him leap to his feet and bound away over a crest, and I decided that we had not waited long enough. We kept on his trail, however, and once we had reached the crest that he had crossed, we saw him lying three hundred feet down its farther side, crumpled on the rocks where he had fallen.

That he was a wonderful specimen was immediately obvious. As a matter of fact, that last male I shot, and one other that Morden had secured, were the two best specimens we managed to obtain.

Ovis poli are about the same size as are the bighorn sheep of North America, but poli carry horns that are much larger than are those of any other sheep in the world. They grow in a beautiful open spiral, and the points flare out to the sides in a wonderfully graceful curve. The largest horns we obtained measured fifty seven and one quarter inches along the outside of the spiral, and Morden and I each obtained a specimen of about the same size. We found many bleaching poli skulls lying about the Pamirs, and on one such skull was a

pair of horns measuring slightly over sixty inches, though we feel certain that not one of the live animals we saw carried any such pair as that. The largest pair ever recorded were also a "pick up"; they measured seventy five inches. The fact that among the hundreds of animals we saw there was not a single pair of horns that approached such a length tells plainly how extraordinary such a measurement is.

It is surprising how light and brittle are the bones of these sheep. One would imagine that an animal with horns so large would itself be far more sturdy. The heaviest one we weighed tipped the scale at two hundred and thirty-four pounds, though, of course, he was shot in the spring when he had not an ounce of fat on him. Not only are their bones light, but also their necks are slender and not at all muscular, and the horns, though large, are much lighter than they appear, which might account for the lack of extreme muscular development.

Ibex, which we hunted in the Thian Shan, are as interesting as poli, and are, to my mind, harder to hunt. They are goats, while the poli are sheep; but such goats as the Thian Shan ibex are not to be compared with any other animals of the same family. They live in country which is much more precipitous than are the Pamirs, and the elevation of the peaks about which they delight to roam is quite great enough to make hunting difficult. Furthermore, the district in which we hunted

them is built on such an enormous scale that it is an all-day task to descend from one ridge, cross a valley, and ascend to the crest of the mountain on the farther side.

It was our purpose to rise before daylight, and try to reach the elevations early enough to find some point of vantage from which we could see the ibex as they climbed upward during the morning hours. The theory was quite all right. In practice it seemed seldom to work. It has been said that ibex are less keen than poli, but I was able to see little difference between the two in that regard, and the ability of the ibex to climb among crags and precipices where there is no foothold for a man often makes it quite impossible to follow them.

The principal difficulty to be overcome in hunting ibex is their habit of placing sentries. How it is that these goats manage always to place themselves in such perfect strategic positions I cannot guess. On one occasion we spent several hours stalking a band of thirty or forty, only to find when we poked our heads up behind the ridge that shielded us, that a wary old female was standing on a rocky knoll directly between the band and us. She had deliberately left the band, had made her way for a hundred yards or so until she was able to climb that point of rocks, and when we carefully lifted our heads from behind our ridge, there she was, staring directly at us, and so perfectly placed as absolutely to preclude

our approaching more closely to the band. She could see in every direction from her post. No general could possibly have chosen a more perfect position, and she utterly ruined a whole day's hunt, for the moment we saw her, she saw us. She raised her head and stared for an instant, and then snorted and bounded away. Instantly the whole band was in motion, and thirty seconds later they were all gone, while we, after hours of hard climbing, did not get a single shot.

How it is that they are able to detect danger so surely, when marmots, to which they pay almost no attention whatever, are running about almost anywhere, are sitting up and giving vent to their shrill whistles, and are scurrying into sight and out again every few minutes, is beyond me. How is it that an ibex sentinel, who could not have heard us, and who stood very little chance indeed of getting our wind when the wind was blowing from her to us, could be staring directly into our eyes the moment we slowly raised the tops of our heads above an intervening rock? How is it that under those circumstances, such a sentinel will invariably give his snort of alarm, when he must have seen a score of marmots appearing over rocks without showing any interest, much less any signs of fear? And how is it that they can so surely detect a man's head among the rocks two hundred yards away, when we had to be using our field glasses constantly in order to pick them out?

Once or twice, it is true, we were able to get

close to them, but that was only because they seldom look for danger from above. That, as I have said, is a common weakness of most mountain animals. Sheep and goats in most portions of the world tend to watch the slopes below them with the utmost care, but they are likely to think very little of danger from above, even when, sometimes, it is in plain sight.

From a valley, one morning, while I was hunting with a couple of native guides, we made out a band of ibex among the rocks far above us. The stalk we began was a very strenuous one, that led us around the foot of the mountain, and up for two thousand feet over loose rock slides, over steep ledges, along precipitous cliffs, until, after two hours, we found ourselves at the very crest of the mountain.

We had made our way around, until, as we approached the crest, we thought that we might look down the steep farther side and be able to locate the band that we had not seen since we started our stalk. Carefully we raised our heads, and my heart leaped into my throat, for there, hardly thirty yards away, stood a wonderful old fellow, with his long beard blowing in the wind, with his beautiful horns curving gracefully upward and back, and with his eyes clearly riveted on us.

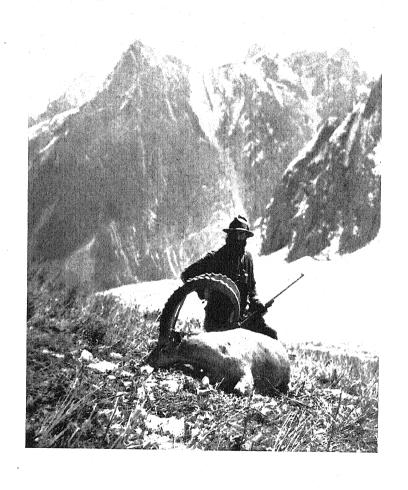
I had expected to see ibex, but I had thought that they would be several hundred feet farther down, and now, with this fine old fellow staring me in the eye, something went wrong with me. I raised my gun and closed one eye, only to see that my sights were all wrong. I could not twist my head enough to get my sights in line. I lowered my gun, wondering what was wrong, and luckily for me the ibex still stood there. The gun appeared to be quite all right as I looked at it, and I raised it again. Once more I closed one eye, and the sights fell into line perfectly. I pulled the trigger, and my ibex fell just where he stood. The others of the band broke instantly into a run, but already, out of the corner of my eye. I had chosen already, out of the corner of my eye, I had chosen another. I let go at him as he fled, and brought him down too. I was delighted with the outcome of that stalk, but for weeks I could not understand what had happened to my sights when first I had aimed. Finally, however, it dawned on me. Despite the fact that I have had more than a little experience with guns, I had somehow — because of surprise, perhaps — closed my right eye instead of my left. Naturally the sights did not appear in line, and not until I had dropped my gun and raised it again did I close my left eye as I should have done at first. Luckily, however, the ibex was as surprised as I, and waited until my momentary aberration had been corrected.

One clear day, after we had collected what specimens we needed, Morden and I were lying out on the very top of a precipitous ridge. Behind us the ridge sloped up to a somewhat higher peak, and before us it dropped away abruptly,

until, by looking over the edge, we could plainly see a halfway level spot fifty or sixty yards below us. As we lay there, a band of about fifty ibex females and young made their way slowly up the mountain side until they were all in sight on the spot below us. We lay quite still and peered over at them. Now and then one of them casually glanced our way, but paid no attention to us, and then they began moving slowly up the slope at one side. Gradually they approached the peak which lay at our backs, trailing slowly upward over the rocks, and still paying no attention to us. We were content to watch them, for there were none among them we needed, and for half an hour they were in plain sight. By that time, however, they had worked around until they were above us, and suddenly they saw us from that new angle, or got our wind. Where, the moment before, they had been apparently entirely contented, now they were in rapid flight. Across those steep rocks a man could not have made his way save at a careful walk, but those goats fairly flew along, leaping twelve or fifteen feet at a bound - never pausing — never seeming to choose a spot where next they would alight. Upward they fled, directly toward the face of an almost perpendicular precipice. We felt certain that they would be forced to turn back, but they did not. They did not even pause in their flight, but bounded straight for that impossible place at full speed. Even the little fellows followed with the greatest energy,

and we were amazed to see them make their way at that furious pace directly across the face of a pointed cliff that thrust itself out toward us like the prow of a Brobdingnagian battleship, and seemed, even through our glasses, to offer not the slightest foothold. Rocks rolled and thundered down the face of the cliff, and we fully expected to see some of the fleeing animals lose their footing and follow, but on they swept, directly to the very point of rocks that thrust itself out toward us. We were tense with watching, and felt certain that those bounding creatures must, at their very next leaps, plunge headlong from the point of the precipice that they had reached. But they did not. Without pausing for an instant — without being able to see what foothold lay ahead of them around the sharp point, they made a marvelous turn, alighted safely where no possible foothold seemed to lie, galloped on without a moment's hesitation, and finally disappeared from sight while the rocks that they had dislodged in their passing still were thundering down the two hundred feet below. Where, a moment before, the face of the cliff had been fairly covered with the gracefully leaping forms of ibex, now not a one remained in sight, and long before the tumbling rocks had reached the bottom, every animal had passed over the ridge and had disappeared down its farther side.

Never before had either of us seen such a wonderful example of sure-footedness and intelligence.



THE AUTHOR WITH A BIG IBEX IN THE THIAN SHAN

It was thrilling to a degree, and why some of those animals did not lose their footing and plunge to their deaths we could not see, even after we had approached the cliff face in an attempt to see how they had been able to find a foothold on it. Certainly no mountaineer would ever have dared cross that cliff save by clinging with his fingers and toes to the tiny crevices that appeared here and there, yet those animals — including the score or more of young ones — had dashed across it as rapidly and apparently as fearlessly as any mettlesome horse might dash across a level, grassy pasture.

It is a gallant sight to see some fine old male, with a flowing beard hanging from his chin, and with his huge, four or five foot, sabrelike horns held boldly up, go dashing off across seemingly impossible rocks. And it is fascinating to watch them with a telescope, when they do not know that they are being watched. During the middle of the day, they lie up and rest, as all animals, wild or domestic, always tend to do, and the large males, with their heavy horns, have all sorts of methods of resting their horns on the rocks, in order to relieve their neck muscles of the weight. I have seen them lying in all sorts of fantastic positions, in their efforts to transfer the weight of their horns to the rocks. I have even seen them standing up to sleep, tilting their heads down until the horns rested on some convenient rock that they had chosen. But given the slightest

sound or movement on which to base their suspicions, and they are off with a wonderful, leaping run, that takes them over the rocks and cliffs in a manner and at a speed that cannot fail to bring the heart of the watcher into his very throat.

Hunting in those portions of Asia that I have Hunting in those portions of Asia that I have visited is as different from hunting in Africa as one can possibly imagine. The vast mountains, with their enormous snow fields and glittering glaciers—the breath-taking valleys and precipices—the strangely barbaric or half-civilized natives—the wary animals—the cold storms of rain or snow or sleet or hail—the great altitudes that try one's lungs, and the stiff climbs that try one's muscles—all these have no counterpart in Africa. Asia north of the Himalayan wall is a barch land Asia north of the Himalayan wall is a harsh land - desert-like for the most part, with oases of surpassing beauty occasionally to be found. Great stretches are above the timber line, and for hundreds of miles not a tree is to be seen. Even grass is often missing, and where the wild animals find food enough to keep them alive is almost a mystery. More difficult hunting than that in which we engaged in the Pamirs and the Thian Shan is rare indeed, but as a result of it we procured excel-lent specimens of poli and ibex, together with several other interesting animals. Roe deer and goitered gazelle were also sent back for the Museum's collection, and our journey made it possible to link up the specimens collected by Roy Chapman Andrews in Mongolia, with those gathered by

YAKS, IBEX, POLI

Arthur S. Vernay and Colonel Faunthorpe in India. There are many things still to be studied in Central Asia, and many types of animals are still to be obtained, but the beginning has been made so far as the American Museum is concerned, and I shall always be glad that I was one of the first two Americans ever to cross Asia through Turkestan and Mongolia, on the road from India to China.

CHAPTER XIII

CAPTURED BY MONGOLS

FROM Kara Shar to Peking, by the route we planned to take, is just about two thousand miles. Even to a person traveling by rail that is not the shortest of jaunts, and to Morden and me, as we made ready to march, the distance seemed endless. We had to travel, of course, on horseback, and our supplies and equipment had to be carried in whatever conveyances or on whatever pack animals were available. From Kara Shar through the Great Turfan Depression, where we dropped down and down until we were nine hundred feet below the level of the sea, and from there through Urumchi to Kuchengtze, which lies on the edge of the desert almost as a seaport lies beside the sea, we made our way rapidly enough - rapidly, that is, in the Central Asiatic sense. It took us twenty days to make four hundred and sixty seven miles. But along this section of the trail our supplies went in light carts, and made exceptional speed; went so rapidly, in fact, that we had some ado to keep up. Beyond Kuchengtze, however, the problem was a very different one.

It was about the middle of October when we arrived at Kuchengtze, and we were very desirous of being able to push on at once, for winter was on the way, and more than fifteen hundred miles of trail lay ahead of us — most of it across the Gobi Desert. Quite aside from the time required for traveling, too, was the time we would need in order to hunt for several animals of that region. We wished to obtain, if possible, a specimen or two of the rare saiga antelope. We wanted to hunt the wild camels that range that desolate land, and we wanted several other specimens in order to make our crossing of such a region worth the time and effort it would require. So we set about organizing our caravan at once.

The Kashmiri hunters and servants who had accompanied us from India had been sent back to their native land with the specimens that we had so far obtained, for we had no desire to risk the fruits of our labors in a land we did not know, and of which we had such unsatisfactory reports. The result was that we were now accompanied only by Mohamed Rahim, an honest and sturdy Ladakh we had hired at Kashgar shortly after leaving the Pamirs. But Mohamed was a host in himself, and did what neither Morden nor I had been able to do in getting us started on our way.

It had been our idea to obtain a camel caravan in order to take us across the desert, and we began optimistically enough, for we were assured by an officer assigned to us by the local official, or Amban, that we should have our caravan promptly. But day after day slipped by without results. Every morning we were assured that the camels

would be ready by noon. Every noon when they failed to appear we were told that they would certainly be ready on the following morning. But they did not materialize. We spoke to the Amban and the Amban's representative. We offered more money than enough, but still nothing happened. Why we were so deceived and detained neither of us has ever learned, but ten days went by without any results at all. It was at this time that Mohamed Rahim stepped into the breach, and began to look for camels himself. It did not take him long to find a man who had thirty able-looking beasts, nor did it take us long to come to an agreement with him. We had learned, by this time, that to cross the desert was not considered an easy task, even by those whose business it was to cross it. As a matter of fact not a single caravan in a year had been across the land we wished to traverse. The Mongols had seceded from China, and had set up a sort of government of their own, with Soviet assistance. The result was that Mongolia was likely to offer more difficulties than those presented by weather and season and desert.

We did not take such stories very seriously, however. Both Morden and I had had many dealings with savages and barbarians. More than that, we were white men, and white men almost invariably have a vast amount of prestige with primitive peoples. We knew perfectly well that we were supposed to have passports and other

permits in order to cross Mongolia, and we did not have them. But we counted on obtaining them at the town of Ulyasutai, which lay five or six hundred miles ahead. Up to the time when we could obtain them, we counted on using our Russian and Chinese passports.

But now came the deal with our caravan bashi. He would take us and would supply his own camels, his own saddles, his own food and men. But for that we were required to pay three hundred taels per camel, despite the fact that the purchase price of camels was only two hundred and fifty taels each. In other words, the hiring of the caravan cost more than it would have cost to buy that many camels. But then, we would have with us five experienced camel men; we would have a guide who knew the trail — or who said he did — and we would have no responsibilities other than keeping up with the caravan on its march to the north and east.

The end of October was approaching as we set out, our camels divided into strings of ten each, with a rope from each camel's nose leading to the pack of the camel ahead. Leading each of the three groups of camels was a little donkey, looking solemnly ridiculous as he kept the string to the first camel's nose taut. Each donkey looked for all the world like some tiny little yard engine towing a string of ten big, bulky box cars along, and the business-like activity of the donkey's legs was most suggestive of a perfectly adjusted machine.

Those tiny little donkeys, by the way, are, to me, one of the most fascinating of all animals. I suspect that deep down within themselves they are very philosophical indeed. To see one of the little fellows keeping as perfectly to the trail as if he were guided by some internal gyroscopic compass, to see them with their heads down, and compass, to see them with their heads down, and with their attention apparently centered on some pleasantly philosophical thought, was a sight that I shall never forget. Behind them, the camels might spit and shriek, or groan lugubriously and kick at each other; — they might pull out of line or follow mildly along. It made no difference to the thoughtful, Oriental philosophy of the donkeys. Their legs kept up their rapid, tireless little walk, and never for a moment did anything seem to trouble their tranquil thought and their concentration on the trail ahead. How they did it I don't know. They never seemed to get any at-I don't know. They never seemed to get any attention. They never got a thing to eat save what they could manage to find for themselves while we were in camp. If the caravan stopped for a moment and there happened to be a tuft of dried grass beside the trail, it would be cropped by one of the donkeys, but it seemed that they went on nothing. Once we made camp, those little fellows were left as utterly alone as an automobile would have been. They were less trouble than an automobile, for they never broke down along the way, and they were never given anything in lieu of gasoline and oil. They never seemed to get

hot from their exertions or to get cold when the thermometer dropped to zero or below. They never seemed to get fatter or thinner in the least degree, although the camels and the horses of the caravan were visibly affected by the hardships they were forced to undergo. Truly, the donkey is a marvelous creature, and despite the fact that it is said that the Gobi Desert can be crossed only with camels, each group of ten camels was led by one of those faultless little creatures that are without the faintest sign of temperament or physical weakness. More than that, each of them generally carried a man in addition to towing ten monster camels astern, and never once did I ever see a donkey slip or balk or fail in his duties in the least degree.

In that regard they were very different from the camels. I had thought that I knew something of camels, for I had seen them, more or less, for years. But until we began that journey across the desert I never had the faintest notion of what a camel is really like. The beasts with which we were outfitted, of course, were the two-humped Asiatic — or Bactrian — camels. They are quite different from the single-humped dromedaries of Africa, just as they are different from anything else that walks the surface of the earth. Of all the ungainly creatures by which the earth is inhabited, the Bactrian camel is, I believe, the most ungainly. His body is strangely misshapen. His long legs are connected with it in the most amazing

and apparently insecure fashion. His hind legs seem almost to be ever ready to detach themselves, and to see a camel slip on the ice and fall is to see such grotesque gyrations as approach the impossible.

It is widely known, of course, that a lion's mouth is completely furnished with a fierce looking set of teeth, but I suspect that it is not so widely understood that a camel is equipped with a set of fangs that appear as terrible as do those of any lion. At every opportunity, too, those camels opened wide their mouths, showing their teeth set in a discouraging background of green and cadaverous flesh, decorated with numerous strings of saliva. In addition to that fearsome habit, the creatures groaned and shrieked and spit — actually spit — at every opportunity. They gave vent to such sounds as might emanate from a fearfully tortured person when one of us did anything — or even nothing — to them. They kicked occasionally, and even a half-hearted kick from a camel might readily break a man's leg. Further-more, when one's heart leaps into one's throat at some sudden and unexpected shriek immediately in one's rear, and when one turns abruptly at the sound and stares into a widely opened, a horribly fanged, and a very discolored mouth, one is certain to make a sudden and involuntary move in the opposite direction. I have done it many times, and so has Bill Morden - always to the vast, though partly hidden, delight of our caravan men.

But these are only the shortcomings of the

camel. He has other qualities. What other beast of burden could carry a six-hundred-pound load across a thousand miles of desert in midwinter with the thermometer dropping far below zero? What other beast could be parked in the open in a driving snow storm, kneeling on the cold ground, utterly at the mercy of the storm and still be ready and willing to perform such tasks as a camel is regularly asked to perform? They have their failings, it is true, and not the least of these is a most extraordinary lack of beauty, but they are worthy beasts for all that, upon which Nature has played a number of tricks not in keeping with the camel's finer characteristics.

It was with our long caravan of these huge and ungainly animals that we started out across the desert, to the tune of the many-toned camel bells. At the rear of each group of ten a larger bell rang slowly and sedately to the rolling step of the beast to which it was attached. From up ahead came the lighter, cheerier sounds of the smaller bells, and one can hardly imagine a more picturesque scene than such a caravan presents as it rolls slowly and majestically along over the level and treeless expanse of desert, with the huge packs adding to the strange shapes of the camels, with the long legs moving slowly, with the heads and the long necks nodding regularly, with the nose ropes looping from nose to pack and again from nose to pack until the leading one is stretched taut behind the saddle of a diminutive and very

businesslike donkey. And with the picture must go the tinkle of light bells and the deep, melodious ring of heavier ones, while occasionally comes the "EE-ee-ee!" of a camel driver attempting to guide his weird and willing animals. Of all the pictures of Asia that I carry in my mind, that, I believe, is the most typical, and despite the arduous journey that lay ahead of us, I found time on more than one occasion to admire it.

For hours at a time I have ridden beside the caravan, conscious of all these strange sights and of the suggestive sounds, conscious too of the silence of the padded footfalls of the heavily laden camels, as they swung their long legs slowly and deliberately forward step after step, and step after step. I have counted the steps—counted—counted—until I seemed almost to fall under a spell, but all of the time I realized that each step that was put behind was one more step that need not be taken again. How endless the desert was. How fearfully far away Peking lay. How nearly impossible it seemed that those endless miles could ever be overcome by steps—mere steps—nothing but steps.

The cold wind blew in our faces. Our beards

The cold wind blew in our faces. Our beards were covered with ice from our breath. Now and then a camel's load would slip, and a caravan man would slide from his donkey in order to push it back into place, while all the time the camels stepped and stepped and stepped, until my mind revolted, and I shook myself to get away from

such thoughts, or fell asleep in my saddle and rode awhile without realizing the number of miles we still had before us.

It was in this manner that we approached and crossed the border of Mongolia, wandering often from the faint trail — lost time after time during the darkness of the night marches — worn and tired from long days in the saddle, from nights spent in wind-whipped, slatting tents torn by fierce desert blasts, half frozen in snow storms that buried our camps beneath white blankets under which tents and ropes and packages froze. Often we were worn out with our efforts to break camp and were tired as we climbed into our saddles for a day's march.

Day after day we plodded on, making fifteen miles a day, or twenty. Sometimes, when the weather improved and the trail was a little more plainly to be seen, we had the good fortune to make thirty, but never more. Nor were these marches made without great difficulty. I often fell asleep in the saddle from exhaustion, and so did every one else in our party. I have seen the caravan men draped over their donkeys, lying face down on the backs of the patient little creatures, hanging one leg and one arm over either side, and sleeping that way for an hour or more at a time, while the remarkable little animals that carried them kept up their steady pace, and never deviated a hair's breadth from the trail, so long as any trail existed.

From our caravan bashi we learned that there was a Mongol military post ahead, near the trail that we were taking. It was apparent that he did not like the prospect, and he suggested that we make a detour in order to avoid it. That was not our purpose, however. We welcomed the opportunity of meeting some of the Mongols, in order to obtain from them the passports and permits we required, and so we pushed on over the desert, which now had changed from a perfectly level plain to a series of rounded hills that stretched away on every side to the horizon.

The weather had changed for the worse, and every night the thermometer was down around zero, with the result that we were forced to delay our start each morning on account of the frozen tents and ropes and other equipment. In order to make up for this lost time, we made it a point to travel far into the night, sometimes keeping on the trail until long past midnight. The camels traveled better at night, for it was colder then. It takes the coldest kind of weather to put a camel on his mettle, but though on account of that we moved at a three mile an hour pace when we were moving, the delays in camp that resulted from the cold and snow seemed more than to make up for any gains we made.

It was one night two weeks after we had left Kuchengtze that the most serious trouble that we had on our entire journey began. We were making our way along the faint trail, with the cold wind blowing in our faces, with the stars beginning to glitter brightly overhead, and with nothing to guide us save the faintly worn trail barely showing in the fading light. The camels were swinging along at a good pace, for the thermometer had reached zero, and they were feeling fit. Morden and the caravan bashi were riding ahead, and I was riding halfway down the long length of the caravan, when I saw, in the faint light, what I took to be three wolves following along beside us at a distance of a hundred yards. I peered hard through the darkness and made out another figure near those I first had seen, and then I saw them move ahead more rapidly and turn in toward the head of the caravan. I spurred my horse forward, but before I had reached Morden, he and the bashi had stopped. The caravan stopped behind them. The tinkling and low booming of the bells ceased. The faint crunch of many padded feet on the snow crust was stilled, and in place of the gentle sounds of the moving caravan there came a deathly stillness, broken only by the sound of my horse's hoofs breaking through the ice-covered snow.

I saw the forms that I had taken for wolves as they approached, and could see that they were men on horseback. Three of them had appeared from the darkness, and as they approached the head of our caravan, I could see a number of others riding back and forth in the distance. Something was up. We could make that out, even before we had had a word with any of these newcomers.

They approached us after we had stopped, and peered into our faces, talking excitedly in a language we could not understand. It was obvious that they were excited by our presence, and in loud voices, which were accompanied by signs that were more intelligible to us, we were ordered to go with them somewhere in the darkness. We took out our flash lights, and shone them in our bearded faces, saying that we were Americans, and telling them of our Russian permits, but they paid little enough attention to us. Nothing we said made any impression. Obviously they understood us as little as we understood them. The result was that when others of them approached they surrounded us and took us with them, while others still took charge of the caravan.

We were taken only about two hundred yards, and there came upon two yurts, or collapsible huts, and a tent. Our escort was made up, by this time, of the better part of a dozen men, all armed with rifles, but although they seemed excited, their attitude was not threatening. They ordered us off our horses, and led us into one of the yurts, but they did not seem to notice me when I took my saddle bags from the saddle and carried them with me.

Inside the yurt there were six Mongols who were seated about a little fire smoking. There was a decided air of indifference, but I joined the circle and lit my pipe, trying to appear friendly but getting no response. Morden and Mohamed Rahim came in presently, and after them came the caravan

bashi and the guide. We tried to find out who their leader was, but we failed. Still, we were satisfied that no particular trouble would result, for these Mongols all wore the regular Russian cap with the Soviet star on it. If they had any connection with the Russians we felt that we would be perfectly safe, for our Russian papers were of the best.

We explained our mission, and told them that we were Americans, but none of that information made the slightest impression on them. The word American was evidently a new one to them. Certainly they did not know its meaning. They looked at our papers, which they could not read and did not understand, and finally, after some difficulty, they asked us through our guide who understood them slightly, if we had any Mongol papers. We explained as well as possible that we did not, and showed them our Russian papers. This last bit of information did not help matters any, and we noticed, too, that a number of soldiers outside the yurt were apparently very excited indeed. Some were coming and going all the time, always carrying their rifles, and we realized that we were at the mercy of a dozen or fifteen possibly more — well-armed barbarians.

Certainly we had failed to make much of an impression, and when they realized that we had no Mongol papers, they began to whisper among themselves. By this time we heard our caravan arrive, and when our indifferent Mongol hosts

had paid no attention to us for several minutes, and all of them but two had left the yurt, we decided that it was time for us to go out and make

camp.

Mohamed Rahim started out first, and as he approached the door, a Mongol standing there shouted something and roughly pushed him back. Mohamed did not know the meaning of this sudden attack, and took a step forward again. This time the big Mongol shouted again, struck him in the face, and felled him to the floor. Morden and I leaped to our feet, wondering what was up, and instantly a group of Mongols came dashing in from outside. A dozen entered, and the crowded place became a bedlam of excited and shouting men. There were only five of us, against triple our numbers, and furthermore not one of us was armed, for we had left our guns on our saddles, hoping to make an impression of friendliness. For a moment we tried to keep the wildly shouting men back, but we knew that it was hopeless. In the dim light from the fire in the center of the yurt I could make out nothing but confusion. The air was filled with shouts and yells, and then I felt two of the Mongols seize me by the shoulders. I was thrown to the floor with a jar that made my head spin, and I lay there, trying not to lose my presence of mind. That the situation was dangerous, I knew. How dangerous it might prove to be I had no means of telling, but we were prisoners — that was obvious. I saw

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Morden lying quite still beneath a couple of Mongols who had floored him, and by now the three natives who belonged to our caravan had been overpowered as well. I closed my eyes and tried to visualize the problem that faced us, but it was difficult. We were in one of the most remote regions of a wildly barbaric land. More than a thousand miles of desert lay between us and civilization, and almost all I knew was that life is very cheap indeed amid the desolation of the Gobi Desert.

CHAPTER XIV

TORTURED

No sooner had my two assailants realized that they had overpowered me than they began a wild and almost unreasonable search of my pockets. They shouted madly as they searched, and they pushed and pulled me about the floor. They rolled me over violently. They sat on me and all the time held my arms in their vicelike grips. It seemed that every Mongol in the yurt was in a veritable frenzy, and the dimly lighted and evilsmelling hut appeared almost like a picture of a madhouse - such a madhouse as Gustave Doré might have painted. Once I had been thoroughly searched I was permitted to sit up, though the two men still held me. I attempted to appear calm, and with my teeth set firmly over my pipestem I continued to smoke — more nervously, I suspect, than I supposed at the time. It was only then that I began to appreciate our position.

We were a thousand miles from the nearest help, and that distance lay across as bleak and desolate a land as is to be found on earth. We were the prisoners of a people far down the social scale, and certainly we were at their mercy. Lives mean little in Mongolia. Torture is not the unthinkable thing there that it has come to be in Europe and

America. Four hundred years ago our own forefathers were busily engaged in torturing others or in being tortured, and then it was a commonplace. Nowadays we have outgrown all that. But these Mongols are more than four hundred years behind America and Europe in civilization. They are the brutal and degenerate descendants of a brutal and ascendant people that once spread over most of Asia and part of Europe. Time was when the Mongol hordes swept everything before them, burning, slaying, torturing, enslaving as they saw fit. Their kingdom was a tremendous continent. Their power surpassed imagination. Kings were their slaves, and races were their subjects. That great period of power is past, now, and the Mongol days of glory and ascendancy are over. Today a scattered few wild nomads dwell in a land of deserts, and are trying to organize a government there. But their political ability has faded. Only their brutal natures remain the same. They are almost the same as were the warriors of a thousand years ago, despite their guns and the pointed caps decorated with Soviet stars.

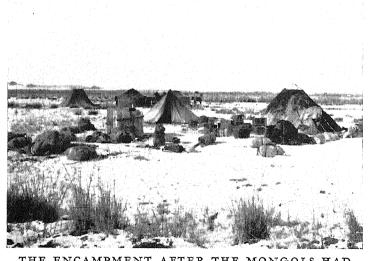
A little of this passed through my mind as I was permitted to sit there between my captors, whose powerful hands still gripped my arms, whose noisome breaths were directed into my face, and whose slanting eyes glinted brightly with their suppressed excitement in the light of the smoking fire of cow dung. The others of our party had fared no better than I. Morden was

held by two men, whose bundled figures seemed huge in the flickering light. The latticed walls were only dimly lighted, and the slanting poles that supported the conical roof seemed almost to disappear in the murky shadows and the smoke above our heads. Boxes and shapeless bundles of Mongol belongings were scattered about the yurt, and hanging from the lattice of the walls were guns and clothes, swords and implements of a dozen different sorts. I recall thinking of European chambers of horrors, where, as a care-free tourist, I had laughed at the crude machines with which prisoners once were tortured. I was closer to such things now, and laughter was very, very far away.

As we sat there and tried to understand what the high-pitched voices were saying as they kept up their insensate chattering, I saw several men come through the low door. They carried ropes, and I closed my eyes. Strangulation was what I expected, for that is common enough in Asia. I opened my eyes again, and saw the newcomers disappear behind me. I steeled myself to feel the cords about my throat. I felt the hands grip me more tightly, and suddenly I was thrown to the ground again. One of the newcomers struck at my face, and I drew back involuntarily. His hand struck my pipe and I saw it fly toward Morden, scattering ashes and embers as it flew. I spit the stem out, for it had been broken off short, and then I saw them throw Morden down too, while



SOME OF THE MONGOL CAPTORS OF MR. CLARK AND MR. MORDEN



THE ENCAMPMENT AFTER THE MONGOLS HAD UNTIED MR. CLARK AND MR. MORDEN AND ALLOWED THEM TO PITCH THEIR OWN TENTS

in the dim light across the hut I saw the confused forms of those who had set upon Mohamed Rahim and upon the caravan bashi and the guide.

I saw Morden's captors cross his wrists in front of him, and wondered what would happen now. Then my own were crossed, and they began to bind us.

For a little time the Mongols had seemed to check themselves, but now, once more, their fiendishness broke loose. A man stood over me and passed a section of rope through his mouth, spit-ting on it as he did so. I remember thinking that he was placing some curse or other on it, but I had little time to think. My mind seemed clear enough, but my thoughts seemed to have little time for continuity. I had no conception of what such creatures might do. I was trying to outguess them — trying to appear calm — trying to make as little trouble as possible in order that they might restrain themselves somewhat. And now they wrapped the rope about my wrists. Half a dozen times it was twisted about them, and a knot was tied. Why we should be tied, I did not know. We could not run away across the desert. We dared not attempt to escape without our caravan and horses and supplies, for if we did we would merely perish miserably of cold and hunger in the desert. That the ropes were intended for something more than handcuffs I felt sure, nor did it take me long to understand.

With my wrists bound together the two who

had held me let go my arms. Now they each seized an end of the rope that bound me, and placing their feet against my wrists, they pulled with all their might. They chattered madly and they jerked. Now and then the foot of one or the other slipped from my wrist, and they chattered more wildly yet. I gritted my teeth, for the pain was excruciating. I could feel the bones grate together, and I closed my eyes again, expecting every instant to feel my wrists break.

was excruciating. I could feel the polles grate together, and I closed my eyes again, expecting every instant to feel my wrists break.

Morden was being treated just as I was, while our servants were faring no better. We were painfully trussed up by now, and as I lay there, gritting my teeth at the pain, I saw a big Mongol stoop over the fire and take from it a kettle. It held water, I believe. Possibly it was tea, but whatever it was, it was hot. I saw him stoop over Morden's face, and Bill, who had not made a

sound up till now, recoiled.

"God, they're going to scald me!" he cried, and I saw some of the water slop over the edge of the pan and fall directly toward his upturned face. I was fascinated with fear. He was to be scalded first and I next. That much seemed certain to me. But Bill jerked his face away, and the water fell harmlessly to the ground. Then it was that I saw what they planned to do. The ropes had been pulled as tightly as it was possible for the Mongols to pull them. But they were not content with that. They poured that hot water over them, in order that as our bonds absorbed the

moisture they would shrink more tightly still. First they poured the water over Bill's hands and then over mine. I fully expected the hot water to burn, but it did n't. Already the pain in our wrists was fearful, and the added pain of the water — if there was any — made no impression.

Now, at last, there was a pause. The berserk rage into which our captors had fallen had, apparently, worn partly away, and they quieted down. They still talked excitedly, and they went out and came in. It seemed that they were planning something further, but we could not make out what it was. We lay quiet for a time, saying nothing, but finally Bill and I began to talk. The Mongols made no effort to stop us, and we tried to figure out what the result of our difficulties might be. That we were doomed to death we felt certain. The question was whether death would come as a result of torture, or whether they would shoot us. It all looked as if torture was to be the method. Already our arms were filled with fiercely shooting pains. Our hands grew cold at first, for only the tiny fire in the center of the yurt served to warm the place, and it was zero outside. Then, as the ropes shrank and the circulation was cut off more and more, our hands seemed to burn like balls of fire, and the pains in our arms grew and grew.

We asked our guide whether or not he had understood anything that the Mongols had been saying. He knew little enough of the Mongol tongue, but we thought he might have gotten some bit of information. He groaned because of his own tortured arms, and replied that he had heard them say that they were going to kill us. It did not surprise us any, but still we did not know whether death might come by torture or not.

We hoped against hope that they would decide to shoot us. It would be so much quicker that way. But we did not expect any such consideration. [It was n't that we were afraid of death. None of us were, apparently. We had a natural aversion to torture, certainly, but death itself was not uppermost in our minds. We would have welcomed a quick death as a means of getting away from our torturers. But more than anything else Bill and I thought of our wives. It would soon be over for us, whichever way things went, but it would be months — possibly years — before they could learn what had happened, and it was possible that they might never learn anything save that we had not returned.

For an hour we lay there, the pains in our hands and arms growing greater every minute. We talked now and then, and we watched every move of the Mongols for some telltale sign of what was to happen next. I groaned occasionally, for somehow it seemed to relieve me a trifle. I even asked Bill Morden why he did n't try it. He gritted his teeth before he spoke, and then looked grimly at me.

"I would n't give these devils the satisfaction," he replied.

They searched us again after we were tied. They turned us this way and that — very roughly. The ropes jerked at our wrists, sending fearful pains burning up our arms. One fierce-looking scoundrel stood with his foot on Bill's head, and one of them sat on me. They rolled us about, generally with their feet, and having cleaned our pockets out, they talked together for a little while, and then ordered us to get to our feet. We obeyed awkwardly, wondering what was to happen now. Then it was that they motioned to us to follow them outside.

Bill and I had had time to talk of those things closest to our hearts. We had each promised the other that if, by any chance, one of us managed to get away alive, he would do what he could for the other's wife. We talked of our insurance. Both of us were glad that we carried enough. It was a decided relief to realize that.

But now we believed that we were bound for the firing line. The order to follow our captors outside could have no other meaning, and there in the dimly lighted *yurt*, surrounded by the evillooking Mongols who were to lead us forth, we said good-by. We might not have another chance.

As I stooped to pass through the low doorway into the darkness outside, I could see several figures with guns dimly silhouetted against the sky. Only the dimmest starlight served to soften

the utter blackness of the desert night. I could make out the black shadows that marked the location of the tent and of the other yurt that made up the rest of the camp. The camels of our caravan were parked not far away, kneeling with their packs still on their backs. Everything was quiet now, and the sharpness of the cold was noticeable even after the limited warmth of the yurt we had just left. A camel groaned in the darkness, and a donkey started to bray, only to break off in the middle of his song. I remember half-smiling to myself as I interpreted those two sounds. Tragedy or farce? It all depended on the viewpoint, I knew, but it was farcical that we should die as enemies of these people when we were more than ready to be their friends. It heartened me a trifle to philosophize even that little bit, and then the armed Mongols surrounded us, and marched us through the dark.

Not a word was spoken. Five of us, bound and tortured, were marching — whither?

They did not take us far, and then, to our surprise, we were not lined up. Instead, they thrust us into a native tent. Our three servants were thrown roughly to the ground, while Morden and I were led forcibly to the back. There, by the faint light of a little lamp, they forced us to sit down with our backs to a tent pole, and there they bound us, passing the ropes about our arms and then tying us back to back, hard against the pole. With one loose end they tied my arm to my

leg, and thus they left us, bound and cramped, with a guard who remained at the tent door with his rifle.

In the yurt there had been a fire. Here there was none, and the temperature was low. We feared for our hands. The circulation, by this time, was completely cut off. There was no way to get them warm. They would freeze certainly, and then they would slough off. That was not a pleasant thought, far out there in the desert. Medical assistance was not to be had nearer than hundreds of miles. It would be impossible for us to travel such a distance without hands. Furthermore, gangrene would certainly set in and we would die miserably on the way. But then, they probably would shoot us yet, or torture us to death. It would be as well, we thought, for without hands we would be worthless. I even decided that, without hands, I never would go home to be a worthless burden on my wife.

Our hands worried us, it is true, for we saw no way of keeping them warm. Yet we were not cold. As a matter of fact, we were in a nervous sweat, for we were certain that our end had merely been deferred until daylight. The pain in our arms was growing worse. Red-hot needles seemed to be shooting beneath the flesh — up our arms and into our bodies. During all this time, too, our guard amused himself by aiming his gun first at one of us and then at another, crooking his finger suggestively about his trigger as he did so. He

seemed to gloat over us, and often held his aim for half a minute at a time.

We wrenched and twisted at our ropes for some relief, for the torture had grown almost beyond belief, but after each move the pain seemed greater. For an hour — two hours — we sat there. Then, strangely enough, a man came in and felt our hands — why, we did not know. He put our fur caps on our heads, where they fell over our eyes, making it impossible for us to see what was going on, except as we could see the feet of any one who entered. It did not help any, save that we could no longer see the fiend with his gun. He may still have amused himself with aiming at us. I do not know. But whether he did or not we could not see, so that slight trial was eliminated.

Morden and I each tried to faint in order to get away from the pain, but we could n't. We talked a little, and then we fell silent. Morden spoke presently.

"Are you out, Jim?"

"No," I replied. "Can't."

Then more silence, with the pain shooting fearfully up our arms — with such pain as seemed beyond our powers of endurance. I wondered if Bill had fainted, and I spoke to him.

"No," he replied. "No good. Can't make it."

And then we decided that perhaps we had better not try. Our hands might possibly freeze more readily that way, and that would certainly mean



THE TWO MONGOL SOLDIERS WHO CONDUCTED MR. CLARK AND MR. MORDEN TO KOBDO



A FERRY ON THE AKSU RIVER IN CHINESE TURKESTAN

death, and we could n't keep from hoping — a very little.

It was nerve-wracking, as well, to be able to see only the feet of those who entered. We had no way of telling, as they approached us, whether to expect blows and further torture, or whether they intended nothing. Morden and I talked a bit, as we sagged in our ropes, back to back, tied to that pole. More men entered and stood about for a time. Then Morden told me that he could see them starting to untie the hands of one of our men. What that meant we did not know. We dared not hope that it was favorable.

They felt our hands again, and talked excitedly together. Evidently they reached some conclusion for they began to untie us. It was not easy, for our hands had swollen terribly, and the ropes were embedded in the flesh, but they finally managed it. I fully expected to feel a rush of pain to my hand as the blood returned, but it did not come. Instead there seemed to be almost a rush of comfort. We wondered, now, whether we might hope for something other than torture or death. We did hope, of course, but not much.

Little by little our hands and arms recovered, while we wriggled and watched our numbed fingers return to life and feeling. What time it was when the ropes were released I do not know, but for the rest of the night we feared what morning would bring.

As the blackness through the doorway of the

tent began to pale before the early morning light, we were keyed to the highest point, wondering what might happen now — watching — listening — hoping for some clue to their intentions. Strangely enough, dawn is a common hour for executions all over the earth. Why, I wonder? An armed Mongol entered, and ordered Mohamed Rahim to follow him. They seemed to have some especial grudge against him, and they took him out with his arms still bound tightly. He had been gone hardly more than a minute when we heard two shots. A shudder ran through me.

"There goes poor Mohamed," said Bill grimly.

"I wonder who'll be next."

For more than an hour we waited. I prayed for Mohamed, I remember. Rarely does one have a finer servant than he. We rather expected to be led out one at a time but no one came for us. Hardly a sound reached our ears from outside. It was very depressing, and the strain was terrific. We sat in silence, each of us with thoughts that we could not express.

After a long nerve-wracking period of almost utter silence, we heard footsteps. The time had come, I thought, for some one else. I closed my eyes, wondering who would be taken now, and then I opened them and glanced up. There stood Mohamed Rahim, with a Mongol who was engaged in tying him up again. I could hardly be-lieve my eyes. It seemed so strange to have him there again — to talk to him when I had so

clearly—so vividly—visualized him lying dead on the frozen ground. He had, he told us, been called out merely in order to explain the contents of some of our boxes. The shots we heard had been fired by a Mongol who had been experimenting with Bill's automatic pistol. It was a vast relief to know that Mohamed was safe, and a ray of hope seemed to pierce what had been very real despair.

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All day long we were kept there in that frigid tent. Luckily we had been wearing our very warmest clothes when we had been captured. Particularly fortunate had we been in having on our felt boots, for without them our feet would certainly have frozen. They were cold as it was, but none of us were frost-bitten. Bill's hand, it is true, had been badly torn where the rope had been wrapped about it, and it was painful. Nor could he do a thing for it.

Late in the afternoon a young Mongol officer appeared in camp. We were led before him in the yurt, and once more, through a very unsatisfactory series of interpreters, we told our story. We watched our judge closely, but the only sign he showed was one of vast contempt for us. After this we were taken back to our tent and tied again. Once more our hearts sank, for hope seemed definitely to have waned.

By this time we had learned that our native camel men, save for the bashi and the guide, had not been tied up, and one of them had finally, after much pleading, gotten permission to bring us some of his native food. It was the first that we had had in thirty-six hours, and it did us more good than we had thought possible. With our arms still tied tightly at the elbows we ate with our servants like so many dogs around a pan, dishing out the rice and bits of meat with our fingers, kneading the food into little balls and throwing it at our mouths, inhaling deeply as we did so, for we could not reach it otherwise.

Daylight faded and darkness shut down. No lamp, this time, served to brighten the tent. We were worn out with nervous waiting. We were bound uncomfortably to the tent pole, but finally both Bill and I managed to slip our bonds down the pole until we could half lie on the ground. We slept some, but from time to time we awoke during the bitter coldness of that night. We were cramped and sore. Still we had no idea what was to befall us. And when we slept we dreamed wild dreams, and awoke in fright to stare into blackness — to peer toward the faint line of starlight where the flaps of the tent parted slightly — to hunt for the figure of our guard in the darkness, and finally to fall asleep once more.

Long before daylight we were awake, and as the dawn came we watched and listened for sounds and signs of hope. Finally some of the Mongols entered. They talked for a time with our guide, and then untied us. We were to be taken, we were told, to another Mongol camp a long way off. Where it was they would not say. Why we were



MR. CLARK AND MR. MORDEN JOURNEYING FROM KASHAGATCH TO BIISK IN SIBERIA



MR. MORDEN AND MR. CLARK IN NATIVE GARB AT KOBDO



to be taken there we could not guess. It was very discouraging. Were we still to lose our lives? We did not know, but even if we were n't, we could never escape from that bleak and forbidding land that winter — possibly not at all.

It was a long and bitter journey. They took us to the north, at right angles to the route on which we had been traveling, and for fifteen days we made our way over mountains and through valleys, across passes and over snow-covered hills. Along one terrible section of the trail we were forced to cross four nine-thousand-foot passes on a single march, surmounting all of them long after dark had settled down to add its difficulties to those of the trail. The camels slipped and fell, one after another. At one time almost every camel in the caravan was down, and time after time we had to unload them in order to make it possible for them to rise. When we arrived at the camp at which we were to stop, daylight was breaking over the horizon in the east. We had been on the trail for more than eighteen hours, and had traveled only twenty miles.

But finally, with our horses almost dying beneath us, we arrived at the little mud town of Kobdo. Here again we were tried, sitting as prisoners in a yart for four long, anxious hours while Mongols came and went and sneered at us as if we were stray dogs from the streets. But finally, after many efforts, we managed to get them to translate — or partly translate — some

Russian papers that we carried. They seemed to be impressed, very slightly, although they had, theretofore, thrown our papers aside and sneered at them. But we had learned that there were a few Russians in Kobdo, and finally we were permitted to see them. From then on we began to have some hope. Our difficulties were not yet over, but our new Russian friends finally influenced the Mongol chief, and we were turned over to the care of the Russians, who promised to see that we should do no harm. Both Bill Morden and I are deeply indebted to those Russians. Without their kind help I believe that we could never have gotten away.

But even with that important assistance it was impossible for us to continue as we had planned. We still had a thousand miles or so to go, in order to reach Peking, but the Mongols refused to give us permission to go that way. Instead, we were forced to travel by wagon and by sleigh for another six hundred miles to the north — already we had traveled two hundred and fifty miles from the camp at which we had been captured — and ultimately we reached a branch line of the Trans-Siberian Railroad at Biisk, Siberia. From there our journey was vastly more simple, and we arrived in Peking on New Year's Day, 1927, when, according to our original plans, we should have gotten through three months earlier.

The story of which I have given the bare outlines here is not, I know, a story of animals such

as I have tried to tell in most of the rest of this volume. It is, however, a story that illustrates the kind of difficulties that sometimes overtake the members of museum staffs in their work of collecting information and specimens for presentation to the public. I have occasionally overheard some visitor to the galleries of the American Museum make some disparaging remark about some group or other. It may be that he has been right in thinking that the presentation of some particular bit of information has not been of the best, but so much work, so much thought and risk may have gone into the making of it that it seems a bit unfair to pass it by with only a flippant remark.

I have had friends who have gone into the field and who have not returned. James Batty lies buried in South America — killed by natives. Carl Akeley's grave is in the heart of Africa — in the very gorilla sanctuary that the Belgian Government set aside as a direct result of Akeley's work there. And there are others. These men have paid the extreme penalty that work in the field occasionally demands. Morden and I were more fortunate, and already, as we study the material that we brought back from Asia, we rarely think of the labor and the difficulties as a result of which those specimens were obtained. Instead, we think of the pleasant things — the beautiful days among the high peaks, the shady lanes of peaceful native villages.

CHAPTER XV

PERMANENT RECORDS OF THE ANIMAL WORLD

FORMERLY the presentation to the public of such information as the museums of natural history had gathered was very unsatisfactory. Cases and cases of stiffly mounted birds were lined up in musty halls, with each bird sitting squarely on a polished mahogany T. There was little about them that was natural. Often they were poorly mounted, and always they were inartistic. That applied, too, to almost everything else presented under the head of natural history. The animals, the collections of minerals, the ethnological exhibits, botanispecimens, fossils, insects, archaeological material, and everything else was similarly handled. It is no wonder that museums were said to be dryas-dust places, wherein absent-minded scientists played with the gathering of unimportant facts and the spinning of attenuated theories. That such a statement was not true hardly affected the opinion of the average layman. It seemed to him to be true, and certainly there was little in such museums that could be said to have wide popular interest.

To-day, however, all that is changed. Museum men are becoming better showmen. Their facts are as scientific — more so, in fact — but

their methods of presenting them to the public are infinitely improved. The result is that they appeal much more strongly to the non-scientific public. To-day there is a generally increasing interest in such matters. The public supports museum work much more generously. The newspapers are always quite ready to give space to the stories of museum accomplishments. Luckily there has grown up a new school of scientists, wherein a man need be no less scientific in the eyes of his fellows if, occasionally, he breaks away from the established rules of the scientific presentation of facts and makes his presentation frankly popular. There are some, it is true, who have lost somewhat of their standing among scientists because of this popular angle that they have taken. Still, many of these men have large followings outside scientific circles, and because of the work that they are doing there is a growing popular under-standing of important scientific problems. All this has its value. To-day there are many wealthy men who, realizing that they are not trained in the gathering of scientific data, still are sufficiently interested to furnish the funds which are the sinews of museums just as they are the sinews of war.

It is very fortunate indeed that this growing interest in such work has come at this particular time. Some of the work in which we are engaged might be put off for a hundred or even five hundred years, for the raw materials, so to speak, would still be available. In other branches of

the work, however, this would not be true. Civilization is rapidly making its mark on the savage tribes of the whole world. Another fifty years comparable to the last in the expansion of the white man will have made an ineradicable mark upon practically every savage and barbaric tribe upon the face of the earth. The ethnologist, then, is faced with the vital necessity of gathering vast amounts of his material now, or of attempting to secure it when the tribes from which it should come have been changed by the onward march of civilization, losing in the process the very characteristics and the folklore upon which so much of the ethnologist's work is based.

The big game, too, is on its way toward extinction. Civilization can, sometimes, advance without eliminating the smaller animals. In Europe, after a thousand years of civilization, wild boars, foxes, deer, and other animals are far from extinct. In America there are many animals still to be found in the most settled districts. But obviously buffaloes and moose cannot survive in a land cut up into farms. In Europe the aurox is practically gone. In Africa, as civilization advances, it is perfectly obvious that elephants and rhinos, buffaloes and lions must be eliminated. Should such animals attempt to live in districts taken over by men trained to civilized life, there could not fail to be a clash. Rabbits can live in a cornfield, but elephants cannot. Coyotes still manage to survive in parts of our West, but rhinos

never will be permitted to make their way about the fields and pastures of Africa when the settler has taken up the land.

It is because of this that the work of recording the big game animals is so very important. Since time immemorial the tiger has roamed in India, but the time must come before long when he will have been exterminated. Similar things are true in every corner of every continent to which mankind takes modern civilization. The smaller animals may be able to hold on for centuries. The larger animals will have been practically eliminated before another hundred years have passed.

Birds, fortunately, are being protected more and more. We have lost the passenger pigeon, it is true, and others that were common only a few years ago are now extinct, but by and large the situation in regard to birds is not a hopeless one. Here and there in the world there are great preserves in which game laws make it possible that the birds and animals may be preserved for many, many years to come. Yellowstone Park is such a preserve. The Kruger National Park in South Africa is such another, and I have hopes that some day before long the beautiful crater of Ngorongoro in Tanganyika Territory will be another still. But even with these oases left in our game-depleted continents it will be difficult indeed for our grandchildren to visualize the marvels of the apex of the Age of Mammals.

The sea, of course, is likely to remain very much

as it has been since time immemorial. In its unexplored depths a vast amount of information still is to be obtained. That the largest creature of which science has any record whatever — past or present — still lives in the sea is widely known. Where the huge brontosaurus of prehistoric times might have weighed twenty-five or thirty tons, whales weighing four times as much, or more, have been captured within recent years. Where a large African elephant might stand twelve feet high at the shoulder, a large sulphur-bottom whale will measure more than that in diameter, and at least one has been measured that was one hundred and three feet in length.

The first actual expedition on which I ever went was one that taught me something about whales. Roy Chapman Andrews was my companion, and we were delighted at the prospect, for neither of us had ever before been on even a minor expedition. Our task was to obtain data about whales from which several models could be built for the American Museum, and I thoroughly enjoyed my experience with Andrews at Amagansett. Later, too, when we had returned, I had more than a little fun modeling the whales under the direction of Doctor F. A. Lucas, who long has been an authority on such creatures as well as on an infinite variety of other subjects.

But of all the work that I have ever done in the museum, the task that is taking most of my time at present is the most interesting.

For a number of years prior to his death, Carl Akeley had been working on a plan to add a wing to the American Museum in order to house a gallery devoted exclusively to Africa. Fortunately, shortly before his death, he was able to interest Mr. George Eastman and Mr. Daniel E. Pomeroy in the plan. With their backing Akeley found it possible to make the first great steps in the realization of his plans. Before he had gone very far, however, he died in the heart of Africa, while he was on an expedition in the interests of African Hall.

His plans were worked out in some detail, however, and certainly no one save Akeley alone had anything to do with the origin of the plan. So widely is this recognized that the Museum, shortly after Akeley's death, decided to name the hall for him. It is Akeley African Hall, then, that is one of the American Museum's most ambitious projects. Already we are working on it, and I am glad that because of my experience in Africa, together with my close association with Akeley ever since before he first suggested the idea of African Hall, I have the opportunity of carrying to completion the work that he so ably began.

So great is the work involved in the preparation of such a museum wing, that no one person could possibly do it all, of course. Naturalists and artists, architects and taxidermists are called upon for the best they have to offer. Many a member of the Museum staff is adding his own particular

scientific knowledge to the task. The responsibility of the work of preparation, however, is mine, and fortunately for me I have spent enough time in Africa studying the subjects we wish to present to make it possible for me to carry on what is, without a doubt, the most ambitious project ever attempted by any natural history museum.

It will be a matter of years before African Hall is completed, and in the meantime Asiatic Hall is being prepared. That, too, is a responsibility of mine, and with these two important additions under way I have more than a little to keep me interested. As I write, African Hall is being built in miniature. Every group is being erected on a small scale, with the animals modeled in the postures they will assume when they are mounted. Every background is being painted, and all the accessories are being erected, so that, before work is definitely begun on the hall itself, we will know exactly what results to expect. These model groups are being improved or changed or eliminated, depending upon their success as we view them in the model hall that has already been erected, and very nearly as much artistic effort is being expended on the models as will ultimately be expended on the groups that are to be shown to the public. A corps of artists, all of whom have visited Africa, is engaged now in modeling minia-ture animals, in painting miniature backgrounds, in constructing miniature trees and bushes and

water holes and bamboo thickets. Some of the figures have reached the point at which work has been begun on the taxidermy itself. Akeley's own group of elephants will be placed in the center of the hall. His bronzes of native Africans spearing lions will stand at the main entrance. His gorillas will be placed in a group, the background and accessories for which were being obtained by Akeley's own expedition, when he himself died. But there are to be thirty-six groups in the hall, in addition to the elephants and rhinos that will be placed without cases on the floor. Most of these groups are still to be designed and collected. Hardly a single one can yet be said to be definitely planned. Changes are being made almost every day. Experiments that may change almost anything that has so far been done are being carried out. But the work has been carried sufficiently far for us definitely to be able to say that when, finally, the hall is built and the groups are installed, it will be the most beautiful and the most complete effort of the kind ever carried out.

Even to-day, when Africa still has much to show the person interested in Nature, few of us are able to spend the money or the time necessary to view her wonders. African Hall, however, will tell a very complete and very interesting story of the major points of interest in the wild life of the continent, and will be easily reached by hundreds of thousands who never, in all their lives, will be

able to see the shores of Africa rise above the blank horizon of the sea. For the future, too, the hall will be more valuable than for the present, and its exhibits will last far beyond the time when Africa will have become as devoid of game and as civilized as Europe or America.

Many specimens and a vast amount of information are still to be gathered in the field before African Hall can be completed, and already I have many plans that will, I hope, lead me to that land more than once before this task has reached its end. Air castles are not uncommon things, I know, but the museum man is often very fortunate indeed so far as his own are concerned, for they often delight him by materializing, and when they do he has the added satisfaction of knowing that through them he has accomplished something of value to the world.

Time was when few people realized the enormous potential value that lay in research work, but that time, fortunately, has gone. Nowadays our large corporations maintain research laboratories wherein scientists work with all sorts of "impractical" problems, learning the reactions of chemicals to each other, experimenting with mechanical and electrical problems that seem to have no immediate practical application, delving into pure science and turning up all sorts of information, succeeding with all sorts of strange experiments, learning through all sorts of failures. Now and then some of these experiments demonstrate

their enormous practical value, with the result that the outlay for the laboratories and for the experimenters becomes a trifle beside the profit from some development or other. Business knows this, and the fact that museums are laboratories of a somewhat similar nature is making itself felt among a constantly growing number of our citizens. Designers of furniture, dress goods, and many other articles commonly seen in our stores obtain many of their ideas from museums, where they are permitted to copy and sketch and study to their heart's content. The studies of museum scientists have made it possible to correct difficulties due to diseases among fishes and animals and birds. More than once whole industries have been built up as the result of some scientist's investigations, and business owes much more to the work done by museums than many people realize.

The educational value of museums is widely

The educational value of museums is widely recognized, and because of it alone our museums are worthy of generous support, but in addition to this phase, there are others of equal value, for museums are, in reality, great research laboratories that are energetically at work in their efforts to educate, to assist, and to improve humanity.

When first I entered the American Museum of Natural History, it was with the idea of applying my training as a sculptor to the artistic mounting of animals. For twenty-five years I have been engaged at that, but more and more has pure sculpture made its way into the work. It is not

with mounted animals alone that I am occupied. In addition to directing the work of preparation I am engaged in sculpturing a series of figures which, when they are cast in bronze, will probably take their places in the completed African Hall. In this case the figures are to represent the more important and interesting African native tribes, for it is obvious that the natives have a definite relation to the animals — a relation that should be recognized in the Hall, just as it is obvious to any one who has visited Africa.

should be recognized in the Hall, just as it is obvious to any one who has visited Africa.

Such projects as African Hall, of course, require the expenditure of large sums of money. A single group, by the time it has been completed, may call for the outlay of twenty-five thousand dollars, and there are many course. lars, and there are many groups. It is here that the layman can be of great assistance. Men who the layman can be of great assistance. Men who can afford to present the museum with funds will find that their money is used to excellent advantage. Any one interested is always welcome. There is never any hesitation on the part of the Museum to explain its plans, or to tell of its aspirations. Nor need one feel that he can have no part if he cannot afford to make so handsome a gift as one of these great groups. The museum gift as one of these great groups. The museum has thousands of members, whose small membership fees are very useful. Furthermore, each member, through the magazine published by the Museum, is kept informed as to the progress of scores of different plans, and is given an opportunity to read the numerous accounts that are constantly

being prepared for the magazine by those who go into the field.

It is not to be doubted that there are some who view a museum of natural history as a sort of "dead circus", but that uninformed point of view is rapidly making way before an enlightened understanding of the work that is being done. It may be that the immediate value of some phases of the work is a little hard to see, but the work is enormously valuable for all that. Furthermore, as public support grows, museums find it more and more possible to obtain better men in competition with the outside world, and better personnel will continue to increase the value of this already vastly important work.

It is obvious to those who have been in touch with museums for more than a little while, that there is a growing interest in museum work. It is gratifying to us, and it is tremendously helpful. There is an obvious and constructive trend. these days, for which every museum is thankful. Because of the increasing interest and growing support on the part of the public, we are able to perform our work to better advantage. Then, with every new and striking hall we are able to open with every handsome and appealing group that is put on view - popular interest is increased and popular support is more readily obtained. If that continues, the time is bound to come when our museums will be valuable and beautiful indeed when our air castles will have materialized for the

TRAILS OF THE HUNTED

benefit and enjoyment of the world — when such observations as these of mine will be more widely recognized for what they are — a sympathetic account of those appealing creatures whose past is more ancient than that of man and whose future is darkened by the tragic shadow of extinction.

THE END